



STIC Search Report

EIC 1700

STIC Database Tracking Number: 148023

TO: Sin J Lee
Location: REM 9D60
Art Unit : 1752
March 28, 2005

Case Serial Number: 10/773930

From: Les Henderson
Location: EIC 1700
REM 4B28 / 4A30
Phone: 571-272-2538

Leslie.henderson@uspto.gov

Search Notes

Search Notes
(Please Scan ALL)



STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher or contact:*

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- I am an examiner in Workgroup: Example: 1713
➤ Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28





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 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

BIBDATASHEET

Bib Data Sheet

CONFIRMATION NO. 7400

SERIAL NUMBER 10/773,930	FILING DATE 02/06/2004 RULE	CLASS 430	GROUP ART UNIT 1752	ATTORNEY DOCKET NO. FIS920030408US1
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APPLICANTS

Wenjie Li, Poughkeepsie, NY;

Pushkara R. Varanasi, Poughkeepsie, NY;
 Alyssandrea H. Hamad, Cincinnati, OH;

** CONTINUING DATA *****

None SJL

** FOREIGN APPLICATIONS *****

None SJL

IF REQUIRED, FOREIGN FILING LICENSE GRANTED

** 05/05/2004

Foreign Priority claimed <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	STATE OR COUNTRY NY	SHEETS DRAWING 3	TOTAL CLAIMS 30	INDEPENDENT CLAIMS 2
35 USC 119 (a-d) conditions met <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance				
Verified and Acknowledged <i>[Signature]</i> Examiner's Signature	<i>[Signature]</i> Initials			

ADDRESS

30449
 SCHMEISER, OLSEN + WATTS
 SUITE 201
 3 LEAR JET
 LATHAM, NY
 12033

TITLE

Negative photoresist composition involving non-crosslinking chemistry

FILING FEE

RECEIVED

FEES: Authority has been given in Paper
 No. _____ to charge/credit DEPOSIT ACCOUNT
 No. _____ for following:

<input type="checkbox"/> All Fees
<input type="checkbox"/> 1.16 Fees (Filing)
<input type="checkbox"/> 1.17 Fees (Processing Ext. of time)
<input type="checkbox"/> 1.18 Fees (Issue)

=> d his ful

(FILE 'HOME' ENTERED AT 09:51:01 ON 28 MAR 2005)

FILE 'HCA' ENTERED AT 09:51:09 ON 28 MAR 2005

E LE WNEJIE/AU

E LE WENJIE/AU

E LE WENJII/AU

E LI WENJIE/AU

L1 144 SEA ABB=ON PLU=ON LI WENJIE/AU

E VARANASI PUSHKARA?/AU

E VARANASI PUSHKARA R?/AU

L2 41 SEA ABB=ON PLU=ON VARANASI PUSHKARA R?/AU

E HAMAD ALYSSANDREA/AU

E HAMAD ALYSSANDREA?/AU

L3 9 SEA ABB=ON PLU=ON HAMAD ALYSSANDREA?/AU

L4 0 SEA ABB=ON PLU=ON L1 AND L2 AND L3

L5 7 SEA ABB=ON PLU=ON L1 AND L2

L6 0 SEA ABB=ON PLU=ON L1 AND L3

L7 0 SEA ABB=ON PLU=ON L2 AND L3

D SCAN L5

FILE 'LREGISTRY' ENTERED AT 09:58:15 ON 28 MAR 2005

L8 STRUCTURE

L9 STR L8

FILE 'REGISTRY' ENTERED AT 10:03:03 ON 28 MAR 2005

L10 50 SEA SSS SAM L9

D QUE STAT

D QUE STAT

FILE 'LREGISTRY' ENTERED AT 10:51:34 ON 28 MAR 2005

L11 STR L9

FILE 'REGISTRY' ENTERED AT 10:52:14 ON 28 MAR 2005

L12 50 SEA SSS SAM L11

D QUE STAT

D QUE STAT

L13 104129 SEA SSS FUL L11

SAV L13 LEE930/A

FILE 'LREGISTRY' ENTERED AT 10:58:39 ON 28 MAR 2005

L14 STR L11

FILE 'REGISTRY' ENTERED AT 11:05:59 ON 28 MAR 2005

L15 50 SEA SUB=L13 SSS SAM L14

DIS

L16 36454 SEA SUB=L13 SSS FUL L14

SAV L16 LEE930A/A

FILE 'LREGISTRY' ENTERED AT 11:07:31 ON 28 MAR 2005

L17 STRUCTURE L14

D QUE STAT

FILE 'REGISTRY' ENTERED AT 11:15:09 ON 28 MAR 2005

L18 50 SEA SUB=L13 SSS SAM L17

FILE 'LREGISTRY' ENTERED AT 11:17:54 ON 28 MAR 2005

L19 STRUCTURE L17
D QUE STAT

FILE 'REGISTRY' ENTERED AT 11:27:48 ON 28 MAR 2005
D QUE STAT L18

L20 9588 SEA SUB=L13 SSS FUL L17
SAV L20 LEE930B/A
D SAV

L21 23 SEA SUB=L13 SSS SAM L19

L22 1215 SEA SUB=L13 SSS FUL L19
SAV L22 LEE930C/A
D SAV
D QUE STAT

FILE 'LREGISTRY' ENTERED AT 11:33:56 ON 28 MAR 2005

L23 STR L19

FILE 'LREGISTRY' ENTERED AT 11:36:07 ON 28 MAR 2005

FILE 'REGISTRY' ENTERED AT 11:36:18 ON 28 MAR 2005
D QUE STAT

L24 23 SEA SUB=L13 SSS SAM L23

L25 1206 SEA SUB=L13 SSS FUL L23
SAV L25 LEE930D/A
D SAV
D QUE STAT
D QUE STAT L13

FILE 'HCA' ENTERED AT 11:56:46 ON 28 MAR 2005

L26 2500 SEA ABB=ON PLU=ON (NEG OR NEGATIVE) (2A) (PHOTORESIST?
OR PHOTO(A) (RESIST# OR RESIST#))
E PHOTOACID GENERATOR/CT
E PHOTOACID/CT
E PHOTO ACID GENERATOR/CT
E ACID GENERATOR/CT
E PHOTOACIDIT
E PHOTOACID/IT
E E3+ALL
E PHOTOACID/CT

L27 3383 SEA ABB=ON PLU=ON (PHOTOACID? OR (PHOTO# OR LIGHT# OR
IRRADIAT?) (2A) ACID#) (2A) GENERAT?

L28 19659 SEA ABB=ON PLU=ON PHOTOACID? OR (PHOTO# OR LIGHT# OR
IRRADIAT?) (2A) ACID#

FILE 'HCA' ENTERED AT 12:15:34 ON 28 MAR 2005

L29 64190 SEA ABB=ON PLU=ON L13

L30 54 SEA ABB=ON PLU=ON L29 AND L27

L31 135 SEA ABB=ON PLU=ON L29 AND L28

L32 14 SEA ABB=ON PLU=ON L26 AND L30

L33 14 SEA ABB=ON PLU=ON L26 AND L31

L34 14 SEA ABB=ON PLU=ON L32 OR L33
D L34 1-14 HITSTR

L35 21747 SEA ABB=ON PLU=ON L16

L36 5459 SEA ABB=ON PLU=ON L20

L37 630 SEA ABB=ON PLU=ON L22

L38 629 SEA ABB=ON PLU=ON L25

L39 18 SEA ABB=ON PLU=ON L27 AND L35

L40 2 SEA ABB=ON PLU=ON L27 AND L36

L41 2 SEA ABB=ON PLU=ON L27 AND L37

L42 2 SEA ABB=ON PLU=ON L27 AND L38
L43 18 SEA ABB=ON PLU=ON (L39 OR L40 OR L41 OR L42)
D L43 1-18 HITSTR
D QUE STAT

FILE 'LREGISTRY' ENTERED AT 12:25:12 ON 28 MAR 2005
L44 STR L19

L45 STR L44

FILE 'REGISTRY' ENTERED AT 12:34:57 ON 28 MAR 2005
L46 50 SEA SUB=L13 SSS SAM L45
L47 3980 SEA SUB=L13 SSS FUL L45

FILE 'LREGISTRY' ENTERED AT 12:36:31 ON 28 MAR 2005
L48 STR L47

FILE 'REGISTRY' ENTERED AT 12:38:01 ON 28 MAR 2005
L49 10 SEA SUB=L13 SSS SAM L48
D QUE STAT L47
L50 306 SEA SUB=L13 SSS FUL L48

FILE 'LREGISTRY' ENTERED AT 12:39:59 ON 28 MAR 2005
L51 STR L48

FILE 'REGISTRY' ENTERED AT 12:40:43 ON 28 MAR 2005
L52 0 SEA SUB=L13 SSS SAM L51
D QUE STAT
L53 25 SEA SUB=L13 SSS FUL L51
D SAV
SAV L47 LEE390E/A
SAV L50 LEE390F/A
SAV L53 LEE390G/A

FILE 'HCA' ENTERED AT 12:44:18 ON 28 MAR 2005
L54 6183 SEA ABB=ON PLU=ON L47
L55 123 SEA ABB=ON PLU=ON L50
L56 17 SEA ABB=ON PLU=ON L53
D SCAN L56
L57 8 SEA ABB=ON PLU=ON L54 AND L28
L58 2 SEA ABB=ON PLU=ON L55 AND L28
L59 0 SEA ABB=ON PLU=ON L56 AND L28
L60 1 SEA ABB=ON PLU=ON L54 AND L26
L61 0 SEA ABB=ON PLU=ON L26 AND L55
L62 0 SEA ABB=ON PLU=ON L26 AND L56
L63 10 SEA ABB=ON PLU=ON L57 OR L58 OR L60
L64 25 SEA ABB=ON PLU=ON L63 OR L43
D QUE STAT
L65 36 SEA ABB=ON PLU=ON L64 OR L34
D QUE STAT L65

FILE 'LREGISTRY' ENTERED AT 13:33:08 ON 28 MAR 2005
D QUE STAT L13
L66 STR L45

FILE 'REGISTRY' ENTERED AT 13:44:04 ON 28 MAR 2005
L67 0 SEA SUB=L13 SSS SAM L66
D QUE STAT
L68 50 SEA SUB=L13 SSS FUL L66

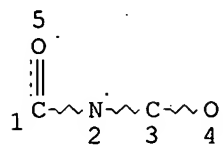
D SAV
 SAV L68 LEE390H/A
 D SAV

FILE 'HCA' ENTERED AT 13:47:21 ON 28 MAR 2005

L69 15 SEA ABB=ON PLU=ON L68
 D SCAN
 D L69 1-15 TI
 L70 0 SEA ABB=ON PLU=ON L69 AND L28
 L71 0 SEA ABB=ON PLU=ON L69 AND L26
 D QUE STAT
 D QUE STAT L56
 L72 32 SEA ABB=ON PLU=ON L69 OR L56
 D QUE STAT
 L73 382336 SEA ABB=ON PLU=ON REPROGRAPH?/SC, SX
 L74 0 SEA ABB=ON PLU=ON L72 AND L73

=> => d que stat l65

L11 STR

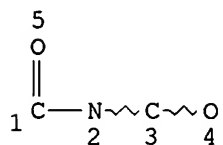


NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L13 104129 SEA FILE=REGISTRY SSS FUL L11
 L14 STR

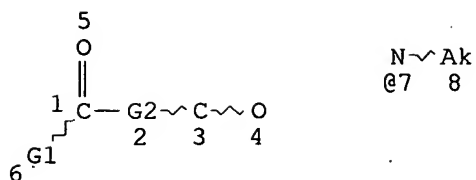


NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L16 36454 SEA FILE=REGISTRY SUB=L13 SSS FUL L14
 L17 STR



VAR G1=AK/CB

VAR G2=NH/7

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

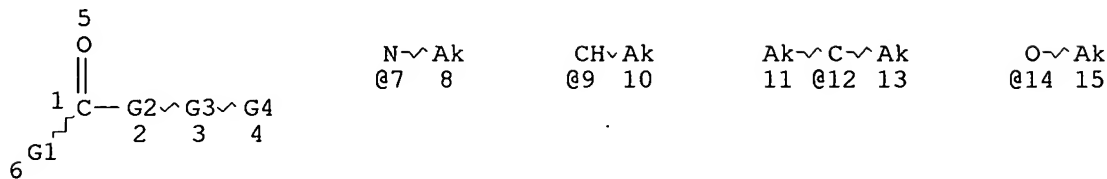
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE

L19 STR



VAR G1=AK/CB

VAR G2=NH/7

VAR G3=CH2/9/12

VAR G4=OH/14

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M1-X50 C AT 8

ECOUNT IS M1-X10 C AT 10

ECOUNT IS M1-X10 C AT 11

ECOUNT IS M1-X10 C AT 13

ECOUNT IS M1-X10 C AT 15

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

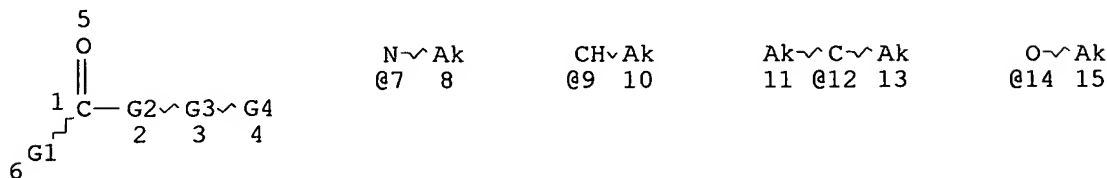
NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE

L20 9588 SEA FILE=REGISTRY SUB=L13 SSS FUL L17

L22 1215 SEA FILE=REGISTRY SUB=L13 SSS FUL L19

L23 STR



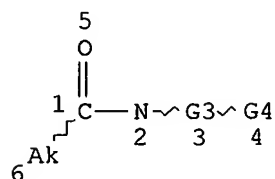
VAR G1=AK/CB

VAR G2=NH/7
 VAR G3=CH2/9/12
 VAR G4=OH/14
 NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED
 ECOUNT IS M1-X50 C AT 8
 ECOUNT IS M1-X6 C AT 10
 ECOUNT IS M1-X6 C AT 11
 ECOUNT IS M1-X6 C AT 13
 ECOUNT IS M1-X6 C AT 15

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE

L25 1206 SEA FILE=REGISTRY SUB=L13 SSS FUL L23
 L26 2500 SEA FILE=HCA ABB=ON PLU=ON (NEG OR NEGATIVE) (2A) (PHOTOR
 ESIST? OR PHOTO(A) (RESIST# OR RESIST#))
 L27 3383 SEA FILE=HCA ABB=ON PLU=ON (PHOTOACID? OR (PHOTO# OR
 LIGHT# OR IRRADIAT?) (2A)ACID#) (2A)GENERAT?
 L28 19659 SEA FILE=HCA ABB=ON PLU=ON PHOTOACID? OR (PHOTO# OR
 LIGHT# OR IRRADIAT?) (2A)ACID#
 L29 64190 SEA FILE=HCA ABB=ON PLU=ON L13
 L30 54 SEA FILE=HCA ABB=ON PLU=ON L29 AND L27
 L31 135 SEA FILE=HCA ABB=ON PLU=ON L29 AND L28
 L32 14 SEA FILE=HCA ABB=ON PLU=ON L26 AND L30
 L33 14 SEA FILE=HCA ABB=ON PLU=ON L26 AND L31
 L34 14 SEA FILE=HCA ABB=ON PLU=ON L32 OR L33
 L35 21747 SEA FILE=HCA ABB=ON PLU=ON L16
 L36 5459 SEA FILE=HCA ABB=ON PLU=ON L20
 L37 630 SEA FILE=HCA ABB=ON PLU=ON L22
 L38 629 SEA FILE=HCA ABB=ON PLU=ON L25
 L39 18 SEA FILE=HCA ABB=ON PLU=ON L27 AND L35
 L40 2 SEA FILE=HCA ABB=ON PLU=ON L27 AND L36
 L41 2 SEA FILE=HCA ABB=ON PLU=ON L27 AND L37
 L42 2 SEA FILE=HCA ABB=ON PLU=ON L27 AND L38
 L43 18 SEA FILE=HCA ABB=ON PLU=ON (L39 OR L40 OR L41 OR L42)
 L45 STR



CH~Ak
 @9 10

Ak~C~Ak
 11 @12 13

O~Ak
 @14 15

VAR G3=CH2/9/12
 VAR G4=OH/14
 NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED
 ECOUNT IS M1-X10 C AT 10
 ECOUNT IS M1-X10 C AT 11
 ECOUNT IS M1-X10 C AT 13
 ECOUNT IS M1-X10 C AT 15

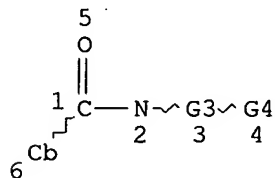
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

L47 3980 SEA FILE=REGISTRY SUB=L13 SSS FUL L45

L48 STR



CH~Ak
@9 10

Ak~C~Ak
11 @12 13

O~Ak
@14 15

VAR G3=CH2/9/12

VAR G4=OH/14

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 6

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M1-X10 C AT 10

ECOUNT IS M1-X10 C AT 11

ECOUNT IS M1-X10 C AT 13

ECOUNT IS M1-X10 C AT 15

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

L50 306 SEA FILE=REGISTRY SUB=L13 SSS FUL L48

L54 6183 SEA FILE=HCA ABB=ON PLU=ON L47

L55 123 SEA FILE=HCA ABB=ON PLU=ON L50

L57 8 SEA FILE=HCA ABB=ON PLU=ON L54 AND L28

L58 2 SEA FILE=HCA ABB=ON PLU=ON L55 AND L28

L60 1 SEA FILE=HCA ABB=ON PLU=ON L54 AND L26

L63 10 SEA FILE=HCA ABB=ON PLU=ON L57 OR L58 OR L60

L64 25 SEA FILE=HCA ABB=ON PLU=ON L63 OR L43

L65 36 SEA FILE=HCA ABB=ON PLU=ON L64 OR L34

=> d 165 1-36 ibib abs hitstr hitind

L65 ANSWER 1 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 142:45902 HCA

TITLE: Compounds bearing tert-butoxycarbonylamino groups as proton scavengers for chemically amplified resists

INVENTOR(S): Sasaki, Yuichi; Kuzuha, Noboru

PATENT ASSIGNEE(S): Eiweiss K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004345996

A2

20041209

JP 2003-143896

200305

21

PRIORITY APPLN. INFO.:

JP 2003-143896

200305

21

OTHER SOURCE(S): MARPAT 142:45902

AB The compds. are Me₃CO₂CNHCHYCOXZ [X = O, imino; Y, Z = H, NHCOCMe₃, (carboxyl-, amino-, NHCOCMe₃-substituted) C1-10 alkyl; Y and/or Z = NHCOCMe₃, groups containing NHCOCMe₃; Y ≠ H when X = imino]. The compds. scavenge proton generated in dark reaction during storage, and do not inhibit activity of acids from **photoacid generators** in light exposure

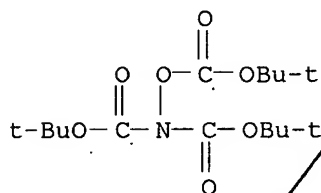
IT 803732-23-2P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(manufacture of compds. bearing tert-butoxycarbonylamino groups as proton scavengers for chemical amplified resists)

RN 803732-23-2 HCA

CN Imidodicarbonic acid, [[[1,1-dimethylethoxy)carbonyl]oxy]-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



IC ICM C07C271-22

ICS C07C271-08; C07C281-02; G03F007-004; G03F007-038; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 23, 24, 34

IT 420812-56-2P 803732-19-6P 803732-20-9P 803732-21-0P

803732-22-1P 803732-23-2P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(manufacture of compds. bearing tert-butoxycarbonylamino groups as proton scavengers for chemical amplified resists)

L65 ANSWER 2 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 140:311999 HCA

TITLE: Photosensitive acid generators and photosensitive compositions

INVENTOR(S): Kodama, Kunihiro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 83 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

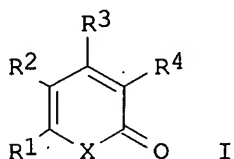
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

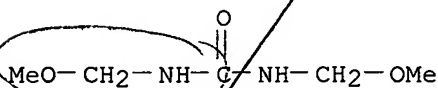
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004099726	A2	20040402	JP 2002-262750	20020909
PRIORITY APPLN. INFO.:			JP 2002-262750	20020909

OTHER SOURCE(S): MARPAT 140:311999
GI



AB The disclosed **photoacid generators** are compds. of the formula I (R1-4 = H, alkyl, aryl, halo, alkoxy; ≥ 1 of R1-4 is a substituent having OSO₂R end group; R = alkyl, aryl, camphor moiety; X = O, NH, NR₅, CH_nNR_{5m}; R₅ =alkyl; n, m = 0, 1, 2; n + m = 2; adjacent two of R1-4 may combine to form rings). The disclosed pos.-working photosensitive composition comprises the **photoacid generator** and an alkali-soluble resin. The disclosed neg.-working photosensitive composition comprises the **photoacid generator**, alkali-soluble resin and acid crosslinking agent. The photosensitive composition exhibit high sensitivity, excellent resolution, and image quality.

IT **141-07-1**
RL: TEM (Technical or engineered material use); USES (Uses)
(crosslinking agent for **photoacid generation**
type neg.-working **photoresist** compns.)
RN 141-07-1 HCA
CN Urea, N,N'-bis(methoxymethyl)- (9CI) (CA INDEX NAME)



IC ICM C09K003-00
ICS C07C309-65; C07C381-12; C07D311-52; G03F007-004; G03F007-038;
G03F007-039; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 38
ST **photoacid generator** photoresist compn
IT Photoresists
(**photoacid generating** agents for)
IT **141-07-1** 3089-11-0 4356-60-9 17464-88-9 161679-94-3
162846-57-3 162846-59-5 185502-14-1

RL: TEM (Technical or engineered material use); USES (Uses)
 (crosslinking agent for **photoacid generation**
 type **neg.-working photoresist** compns.)

IT 358-23-6 1076-38-6, 4-Hydroxycoumarin 2386-60-9, Butanesulfonyl
 chloride 6553-96-4, 2,4,6-Triisopropylbenzenesulfonyl chloride

RL: RCT (Reactant); RACT (Reactant or reagent)
 (photoresist **photoacid generator** preparation from)

IT 129674-22-2 158593-28-3 177034-73-0 177034-75-2 199432-82-1
 200808-68-0 228101-60-8 252570-52-8 288620-13-3 288620-15-5
 289706-85-0 325143-38-2 326591-96-2 372968-15-5 503003-65-4

RL: TEM (Technical or engineered material use); USES (Uses)
 (resin for **photoacid generation** type
neg.-working photoresist compns.)

IT 24979-69-9 24979-70-2 143336-94-1 185405-14-5 250378-10-0
 289623-64-9 312620-54-5 321164-59-4 345212-27-3 359635-35-1
 366808-82-4 370102-83-3 370866-39-0 391232-36-3 391613-77-7
 398140-43-7 398140-45-9 398140-54-0 398140-57-3 398140-59-5
 398140-68-6 398140-69-7 398140-77-7 398140-80-2 406702-00-9
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 607710-68-9 607710-71-4 607710-72-5 607710-73-6 607710-76-9
 607710-77-0 608140-58-5 610300-96-4 610300-97-5 610300-98-6
 610301-01-4 610301-04-7 610301-05-8 615278-35-8 676515-85-8
 676515-86-9 676515-87-0 676515-88-1 676515-89-2 676515-90-5
 676515-91-6 676515-93-8

RL: TEM (Technical or engineered material use); USES (Uses)
 (resin for **photoacid generation** type
 photoresist compns.)

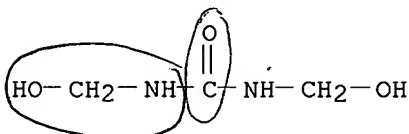
L65 ANSWER 3 OF 36 HCA COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 140:207467 HCA
 TITLE: Negative resist composition
 INVENTOR(S): Yasunami, Shoichiro; Shirakawa, Koji
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: U.S. Pat. Appl. Publ., 43 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004033441	A1	20040219	US 2003-642291	20030818
JP 2004077810	A2	20040311	JP 2002-238157	20020819
PRIORITY APPLN. INFO.:			JP 2002-238157	A 20020819

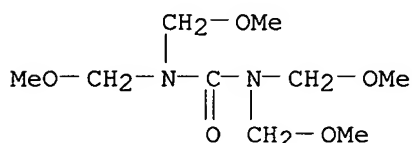
AB A neg. resist composition of the present invention comprises: (A) an alkali-soluble resin; (B-1) a crosslinking agent capable of crosslinking with the alkali-soluble resin (A) by the action of an acid, in which the crosslinking agent is a phenol compound containing: in the mol. one or more benzene rings; and at least two crosslinking

groups bonded to any of the benzene rings, the crosslinking group being a group selected from the group consisting of a hydroxymethyl group, an alkoxymethyl group and an acyloxymethyl group; (B-2) a crosslinking agent capable of crosslinking with the alkali-soluble resin (A) by the action of an acid, in which the crosslinking agent contains at least two specific groups; and (C) a compound capable of **generating an acid upon irradiation** with an actinic ray or radiation.

IT 140-95-4 112288-39-8
 RL: TEM (Technical or engineered material use); USES (Uses)
 (cross linking agent; **neg. photoresist** composition containing)
 RN 140-95-4 HCA
 CN Urea, N,N'-bis(hydroxymethyl)- (9CI) (CA INDEX NAME)



RN 112288-39-8 HCA
 CN Urea, tetrakis(methoxymethyl)- (9CI) (CA INDEX NAME)



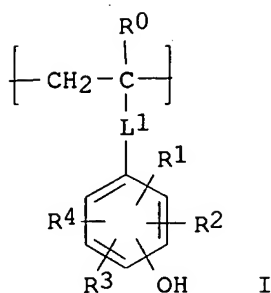
IC ICM G03F007-038
 NCL 430270100; 430302000
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 35, 38, 76
 ST **neg photoresist** compn photolithog
 IT **Negative photoresists**
 (neg. photoresist composition)
 IT Photolithography
 (neg. photoresist composition for)
 IT 1886-74-4 137309-10-5 144317-44-2 153698-46-5 171417-91-7
 258341-98-9 270563-96-7 312386-77-9 328006-70-8 543700-40-9
 660859-78-9 660859-79-0
 RL: TEM (Technical or engineered material use); USES (Uses)
 (acid generator; **neg. photoresist** composition containing)
 IT 161679-94-3P 184877-60-9P 185502-14-1P 197087-74-4P
 421546-91-0P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (cross linking agent; **neg. photoresist** composition containing)
 IT 140-95-4 4211-44-3 4356-60-9 17464-88-9 70587-55-2
 112288-39-8
 RL: TEM (Technical or engineered material use); USES (Uses)
 (cross linking agent; **neg. photoresist** composition containing)
 IT 173786-80-6P, 4-Acetoxystyrene-4-methoxystyrene copolymer
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or

engineered material use); PREP (Preparation); USES (Uses)
 (neg. photoresist composition containing)
 IT 29420-49-3, Potassium nonafluorobutanesulfonate 660859-77-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of acid generator for neg. photoresist
 composition)
 IT 110726-28-8, 1[α -Methyl- α -(4-hydroxyphenyl)ethyl]-4-
 [(α , α -bis(4-hydroxyphenyl)ethyl]benzene
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of cross linking agent for neg.
 photoresist composition)
 IT 162846-57-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (preparation of cross linking agent for neg.
 photoresist composition)
 IT 24979-69-9 24979-70-2 24979-74-6 31853-85-7 149614-53-9
 171429-59-7 185405-14-5 321164-59-4 345212-27-3 345212-56-8
 349619-68-7
 RL: PRP (Properties); TEM (Technical or engineered material use);
 USES (Uses)
 (resin; neg. photoresist composition containing)

L65 ANSWER 4 OF 36 HCA COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 140:119872 HCA
 TITLE: Negative-working resist composition
 INVENTOR(S): Takahashi, Akira; Adekawa, Yutaka; Yasunami,
 Shoichiro
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 74 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004020735	A2	20040122	JP 2002-173071	200206 13
PRIORITY APPLN. INFO.:			JP 2002-173071	200206 13

GI



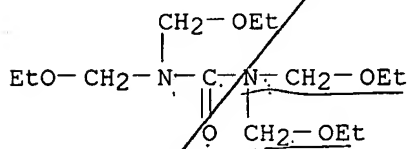
AB The composition contains (A) a compound generating an acid by actinic ray or radiation, (B) a crosslinking agent which crosslinks by the action of the acid and (C) an alkali-soluble polymer having repeating units I (R0 = H, halo, alkyl; L1 = bond, divalent linkage; R1-4 = alkyl, alkoxy, acetoxy, acyl, OH, thiol, halo, acid decomposable group, H; the benzene ring has ≥ 1 OH group whose o-position is not H) and CH2CR20(L2M) (R20 = H, halo, alkyl; L2 = bond, divalent linkage; M = group inhibiting alkali-solubility in non-exposed area). The composition shows high sensitivity especially to x-ray and electron beam, dissoln. resistance to developer, and is useful for lithog.

IT 508220-71-1

RL: TEM (Technical or engineered material use); USES (Uses)
(crosslinking agent; neg. resist composition containing acid generator, crosslinking agent, and alkali-soluble resin)

RN 508220-71-1 HCA

CN Urea, tetrakis(ethoxymethyl)- (9CI) (CA INDEX NAME)



IC ICM G03F007-038

ICS C08F212-14; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

ST neg resist **photoacid generator** crosslinking agent; alkali soluble resin electron beam resist lithog

IT 5395-50-6 13747-15-4 17464-88-9 508220-69-7

508220-71-1 547744-08-1 625121-00-8

RL: TEM (Technical or engineered material use); USES (Uses)
(crosslinking agent; neg. resist composition containing acid generator, crosslinking agent, and alkali-soluble resin)

L65 ANSWER 5 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 140:67637 HCA

TITLE: Proton neutralizing agents for chemically amplified resists showing long pot life

INVENTOR(S): Kuzuha, Noboru

PATENT ASSIGNEE(S): Aibaitsu K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

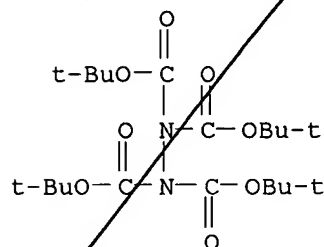
CODEN: JKXX4F

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004002225	A2	20040108	JP 2002-159636	20020531
PRIORITY APPLN. INFO.:			JP 2002-159636	20020531

IT 121561-55-5
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(proton neutralizing agents bearing tert-butoxycarbonyl groups for chemical amplified resists showing long pot life)

RN 121561-55-5 HCA

CN Hydrazinetetracarboxylic acid, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



L65 ANSWER 6 OF 36 HCA COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 139:343479 HCA
 TITLE: Sulfonium compounds as radiation-sensitive acid

generators and resist compositions containing them

INVENTOR(S): Kodama, Kunihiro
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 66 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003307839	A2	20031031	JP 2002-112372	20020415
PRIORITY APPLN. INFO.: JP 2002-112372				20020415

OTHER SOURCE(S): MARPAT 139:343479

AB (Ba)mAaS+Y1Y2 X- (I; Y1, Y2 = alkyl, aryl, aralkyl, heterocyclyl, oxoalkyl, oxoaralkyl; Y1 and Y2 may be bonded together to form a ring; Aa = direct bond, organic group; Ba = group having CONRa or SO2NRa; Ra = H, alkyl; m = 1-3; X- = nonnucleophilic anion), which **generate acids upon irradiation** with actinic ray or radiation, are claimed. Also claimed are resist compns. containing I, pos.-working resist compns. containing I and resins which are decomposed by acids to show increased solubility to an alkaline developer, neg.-working resist compns. containing I, water-insol. alkali-soluble resins, and crosslinking agents which crosslink to the alkali-soluble resins by acids, etc. The resist compns. containing I show high sensitivity, resolution, and good profile, and are especially suitable for irradiation with far-UV and electron beam.

IT 617692-38-3

RL: CAT (Catalyst use); USES (Uses)
 (preparation of sulfonium compds. having amide or sulfonamide linkage as radiation-sensitive acid generators and resist compns. containing them)

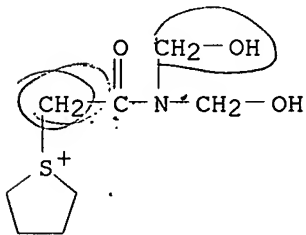
RN 617692-38-3 HCA

CN Thiophenium, 1-[2-[bis(hydroxymethyl)amino]-2-oxoethyl]tetrahydro-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefluoronic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 617692-37-2

CMF C8 H16 N O3 S



CM 2

CRN 45187-15-3
CMF C4 F9 O3 S

-O3S- (CF2)3- CF3

IC ICM G03F007-004
ICS C07C381-12; C08F012-14; C08F220-18; C08F220-26; C08F232-04;
C09K003-00; G03F007-038; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)

ST amide linkage contg sulfonium salt **photoacid**
generator resist; sulfonamide linkage contg sulfonium salt
photoacid generator resist

IT 617692-21-4 617692-22-5 617692-23-6 617692-24-7 617692-25-8
617692-26-9 617692-27-0 617692-29-2 617692-31-6 617692-33-8
617692-34-9 617692-36-1 **617692-38-3** 617692-40-7
617692-42-9 617692-44-1 617692-46-3 617692-47-4 617692-49-6
617692-51-0 617692-53-2 617692-55-4 617692-57-6

RL: CAT (Catalyst use); USES (Uses)
(preparation of sulfonium compds. having amide or sulfonamide linkage
as radiation-sensitive acid generators and resist compns. containing
them)

L65 ANSWER 7 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 136:97849 HCA

TITLE: Light, extruded agricultural compositions
containing a ceramic carrier for water surface
application in paddy fields

INVENTOR(S): Takayanagi, Norikazu; Kimpara, Masaomi; Suzuki,
Munehiro

PATENT ASSIGNEE(S): American Cyanamid Co., USA

SOURCE: U.S., 8 pp.
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

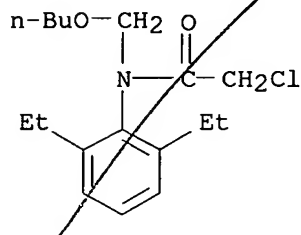
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 6340656	B1	20020122	US 2000-501554	200002 09
PRIORITY APPLN. INFO.:		US 1999-119650P	P	199902 11

AB The light, extruded compns. comprise at least one agricultural
compound a light, extrudable, ceramic carrier, and at least one
surface active agent. The composition may further comprise a mineral
carrier and a binder. The composition is used for applying agricultural
compds. to the water of paddy rice fields by localized
application(s). Light, extruded pesticidal compns. containing a ceramic
carrier for water surface application in paddy fields.

IT **23184-66-9**, Butachlor
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (herbicide in light, extruded agricultural compns. containing ceramic
 carrier for water surface application in paddy fields)
 RN 23184-66-9 HCA
 CN Acetamide, N-(butoxymethyl)-2-chloro-N-(2,6-diethylphenyl)- (9CI)
 (CA INDEX NAME)



IC ICM A01N025-08
 NCL 504367000
 CC 5-4 (Agrochemical Bioregulators)
 IT 87-41-2, PhThalide 133-06-2, Captan 1897-45-6, TPN 6980-18-3,
 Kasugamycin 14698-29-4, Oxolinic acid 17109-49-8,
 Edifenphos 17804-35-2, Benomyl 23564-05-8, Thiophanate-methyl
 26087-47-8, Iprobenfos 27605-76-1, Probenazole 36734-19-7,
 Iprodione 41814-78-2, Tricyclazole 50512-35-1, Isoprothiolane
 50642-14-3, Validamycin 55814-41-0, Mepronil 57369-32-1,
 Pyroquilon 57837-19-1, Metalaxyl 62865-36-5, Diclomezine
 66063-05-6, Pencycuron 66332-96-5, Flutolanil 68694-11-1,
 Triflumizole 76280-91-6, Tecloftalam 89269-64-7, Ferimzone
 115852-48-7, Fenoxanil 133408-50-1, Metominostrobin
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (fungicide in light, extruded agricultural compns.
 containing ceramic carrier for water surface application in paddy
 fields)
 IT 94-11-1 94-74-6, MCPA 94-75-7, 2,4-D, biological studies
 94-80-4 94-81-5, MCPB 102-71-6, Trolamine, biological studies
 709-98-8, Propanil 1014-70-6, Simetryn 1713-12-8, MCPA-butyl
 1713-15-1 1836-77-7, Chlornitrofen 1918-13-4, Chlorthiamid
 1918-18-9, Swep 1928-43-4, 2,4-D 2-Ethylhexyl ester 2008-39-1
 2039-46-5 2212-67-1, Molinate 2453-96-5, MCPA 2702-72-9,
 2,4-D Sodium salt 3653-48-3 5221-16-9 5742-19-8, 2,4-D
 Diolamine 6062-26-6 7287-19-6, Prometryn 10443-70-6,
 MCPB-ethyl 14214-89-2 19666-30-9, Oxadiazon 22936-75-0,
 Dimethametryn **23184-66-9**, Butachlor 24151-93-7,
 Piperophos 25057-89-0, Bentazone 25168-26-7 26544-20-7,
 MCPA-isooctyl 28249-77-6, Thiobencarb 32861-85-1,
 Chlormethoxynil 40487-42-1, Pendimethalin 42576-02-3, Bifenox
 42609-52-9, Dymron 51218-49-6, Pretilachlor 52570-16-8,
 Naproanilide 58011-68-0, Pyrazolate 61432-55-1, Dimepiperate
 71561-11-0, Pyrazoxyfen 72731-35-2 73250-68-7, Mefenacet
 74712-19-9, Bromobutide 79540-50-4, Etobenzanid 82692-44-2,
 Benzofenap 83055-99-6, Bensulfuron-methyl 84496-56-0, Clomeprop
 85785-20-2, Esprocarb 87818-31-3, Cinnemethylin 88678-67-5,
 Pyributicarb 93697-74-6, Pyrazosulfuron-ethyl 94593-91-6,
 Cinosulfuron 96491-05-3, Thenylchlor 97886-45-8, Dithiopyr
 110956-75-7, Pentoxazone 120162-55-2, Azimsulfuron 122008-85-9,
 Cyhalofop-butyl 122548-33-8, Imazosulfuron 125306-83-4,
 Cafenstrole 126801-58-9, Ethoxysulfuron 136849-15-5,

Cyclosulfamuron 153197-14-9, Oxaziclomefone 158237-07-1,
Fentrazamide 188061-45-2, Cyclosulfamuron sodium salt
288301-74-6

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(herbicide in light, extruded agricultural compns. containing ceramic
carrier for water surface application in paddy fields)

IT 98-11-3D, Benzenesulfonic acid, alkyl derivs. 108-95-2D, Phenol,
sulfonates 110-15-6D, Butanedioic acid, dialkyl, sulfo- derivs.,
uses 1321-69-3D, alkyl derivs. 7664-93-9D, Sulfuric acid, alkyl
derivs. 7664-93-9D, Sulfuric acid, alkyl esters 7758-29-4,
Sodium tripolyphosphate 8062-15-5, Lignosulfonic acid
9008-63-3 9017-33-8 9017-33-8D, alkyl derivs. 13478-98-3,
Hexametaphosphate 16005-17-7, Acetylene glycol 25155-19-5D,
Naphthalenesulfonic acid, alkyl derivs. 25322-68-3D, alkyl aryl
ether 25322-68-3D, alkyl aryl ether phosphate 25322-68-3D, alkyl
aryl ether sulfate 25322-68-3D, alkyl ether 25322-68-3D, alkyl
ether phosphate 25322-68-3D, alkyl ether sulfate

RL: MOA (Modifier or additive use); USES (Uses)
(surfactant in light, extruded agricultural compns.
containing ceramic carrier for water surface application in paddy
fields)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L65 ANSWER 8 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 134:302931 HCA

TITLE: Cyclocopolymer of N-cyclohexyldimethacrylamide
and application to a photoresist with
photoacid generator

AUTHOR(S): Takao, Yasuyuki; Miyagawa, Nobukazu; Takahara,
Shigeru; Yamaoka, Tsuguo

CORPORATE SOURCE: Department of Information and Image sciences,
Faculty of Engineering, Chiba University, Chiba,
263-8522, Japan

SOURCE: Journal of Photopolymer Science and Technology
(2000), 13(5), 703-709
CODEN: JSTEEW; ISSN: 0914-9244

PUBLISHER: Technical Association of Photopolymers, Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The cyclized copolymers from N-cyclohexyldimethacrylamide (CHDMA)
with tert-Bu methacrylate (Me3CMA) or tetrahydropyranyl methacrylate
(THPMA) were synthesized. The copolymn. occurred by general
technique of radical polymerization and CHDMA mainly proceeded the cyclized
reaction. The copolymers have high transmittance at 248 nm. These
copolymers indicated high thermal property due to the cyclic
structure in the main chain. The ester unit of the side chain was
easily cleaved by baking with acid catalyst. The acid reaction was
dependent on a number of methacrylate units and a kind of ester group.
However, the cyclized unit from CHDMA was no changed on this
process. The authors applied these copolymers to photoresist based
on the chemical amplified system with PAG and obtained patterns of
pos.-tone image.

IT 334756-54-6P 334756-55-7P 334756-63-7P

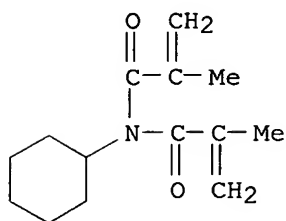
RL: NUU (Other use, unclassified); PNU (Preparation, unclassified);
POF (Polymer in formulation); PREP (Preparation); USES (Uses)

(synthesis of cyclopolymer of N-cyclohexyldimethacrylamide for
use as deep-UV chemical-amplified photoresist)

RN 334756-54-6 HCA
 CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with
 N-cyclohexyl-2-methyl-N-(2-methyl-1-oxo-2-propenyl)-2-propenamide
 (9CI) (CA INDEX NAME)

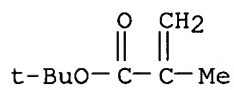
CM 1

CRN 334756-53-5
 CMF C14 H21 N O2



CM 2

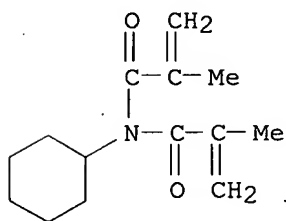
CRN 585-07-9
 CMF C8 H14 O2



RN 334756-55-7 HCA
 CN 2-Propenoic acid, 2-methyl-, polymer with N-cyclohexyl-2-methyl-N-(2-
 methyl-1-oxo-2-propenyl)-2-propenamide (9CI) (CA INDEX NAME)

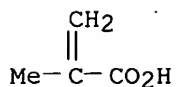
CM 1

CRN 334756-53-5
 CMF C14 H21 N O2



CM 2

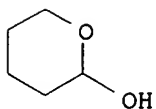
CRN 79-41-4
 CMF C4 H6 O2



RN 334756-63-7 HCA
 CN 2-Propenoic acid, 2-methyl-, polymer with N-cyclohexyl-2-methyl-N-(2-methyl-1-oxo-2-propenyl)-2-propenamide, tetrahydro-2H-pyran-2-yl ester (9CI) (CA INDEX NAME)

CM 1

CRN 694-54-2
 CMF C5 H10 O2

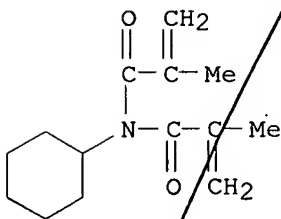


CM 2

CRN 334756-55-7
 CMF (C14 H21 N O2 . C4 H6 O2)x
 CCI PMS

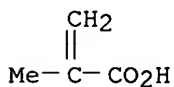
CM 3

CRN 334756-53-5
 CMF C14 H21 N O2



CM 4

CRN 79-41-4
 CMF C4 H6 O2

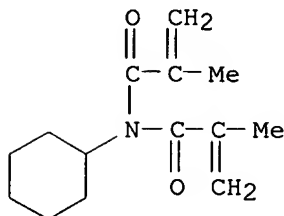


IT 334756-53-5P
 RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (synthesis of cyclopolymer of N-cyclohexyldimethacrylamide for

use as deep-UV chemical-amplified photoresist using)

RN 334756-53-5 HCA

CN 2-Propenamide, N-cyclohexyl-2-methyl-N-(2-methyl-1-oxo-2-propenyl)-
(9CI) (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)

Section cross-reference(s): 35

ST cyclocopolymer cyclohexyl dimethacrylamide photoresist
photoacid generator

IT 334756-54-6P 334756-55-7P 334756-63-7P

RL: NUU (Other use, unclassified); PNU (Preparation, unclassified);
POF (Polymer in formulation); PREP (Preparation); USES (Uses)
(synthesis of cyclocopolymer of N-cyclohexyldimethacrylamide for
use as deep-UV chemical-amplified photoresist)

IT 2918-67-4P, N-Cyclohexyl methacrylamide 334756-53-5P

RL: PNU (Preparation, unclassified); RCT (Reactant); PREP
(Preparation); RACT (Reactant or reagent)

(synthesis of cyclocopolymer of N-cyclohexyldimethacrylamide for
use as deep-UV chemical-amplified photoresist using)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L65 ANSWER 9 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 133:288701 HCA

TITLE: Synthesis of cyclized copolymer from
N-substituted dimethacrylamide and application
to a photoresist with a **photoacid
generator**

AUTHOR(S): Takao, Yasuyuki; Miyagawa, Nobukazu; Takahara,
Shigeru; Yamaoka, Tsuguo

CORPORATE SOURCE: Department of Information and Image sciences,
Faculty of Engineering, Chiba University, Chiba,
263-8522, Japan

SOURCE: Journal of Photopolymer Science and Technology
(2000), 13(2), 207-210
CODEN: JSTEEW; ISSN: 0914-9244

PUBLISHER: Technical Association of Photopolymers, Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

AB N-phenyldimethacrylamide and tert-Bu methacrylate were radically
polymerized in solution. The copolymer has a five-membered imide ring and a
high Tg. The copolymer composition can be optionally obtained. The
authors applied the polymer with a **photoacid
generator** to a photoresist based on the chemical-amplified
system. The properties of these polymers were satisfactory in the
deep-UV region. Good images were obtained from these components.

IT 300343-89-9P

RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(synthesis of cyclized polymer from N-substituted dimethacrylamide for photoresists)

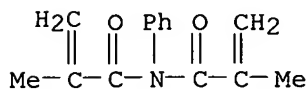
RN 300343-89-9 HCA

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 2-methyl-N-(2-methyl-1-oxo-2-propenyl)-N-phenyl-2-propenamide (9CI)
(CA INDEX NAME)

CM 1

CRN 7370-86-7

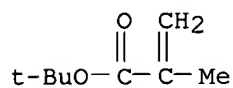
CMF C14 H15 N O2



CM 2

CRN 585-07-9

CMF C8 H14 O2



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35

ST cyclized copolymer dimethacrylamide butyl methacrylate photoresist
photoacid generator polymn

IT **300343-89-9P**

RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(synthesis of cyclized polymer from N-substituted dimethacrylamide for photoresists)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 10 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 133:252737 HCA

TITLE: Preparation of caged amino acids

INVENTOR(S): Shiono, Hirofumi

PATENT ASSIGNEE(S): Bunshi Bio Photonics Kenkyusho K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 96 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

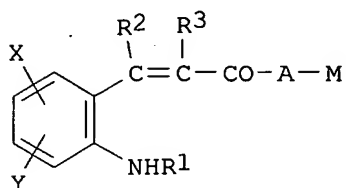
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2000264868	A2	20000926	JP 2000-1702	20000107
US 6329546	B1	20011211	US 2000-480458	20000111
PRIORITY APPLN. INFO.:				19990112
				A

OTHER SOURCE(S): MARPAT 133:252737
GI



I

AB Title compds. I (X, Y = H, halo, C1-4 alkyl, C1-4 alkyloxy, C1-4 alkylamino, benzo; R1-R3 = H, C1-4 alkyl; A = amino acid residue selected from Gly, Ala, Val, Leu, Ile, Ser, Thr, etc.; M = H, alkali metals, alkaline earth metal). (E)-3-[4,5-dimethoxy-2-(trimethylsilylethoxycarbonyl)aminophenyl]-2-methyl-2-propenoic acid was reacted with glutamine tert-Bu ester hydrochloride in the presence of ClCO2Bu-iso and N-methylmorpholine in THF at room temperature for 1 h to give 73.9% (E)-N-glutamine tert-Bu ester 3-(2-amino-4,5-dimethoxyphenyl)-2-methyl-2-propenoic acid amide, which was reacted with F3CCO2H in CH2Cl2 at 30° for 24 h to give 93.8% (E)-N-L-glutamine 3-(2-amino-4,5-dimethoxyphenyl)-2-methyl-2-propenamide, which released glutamic acid when irradiated with light.

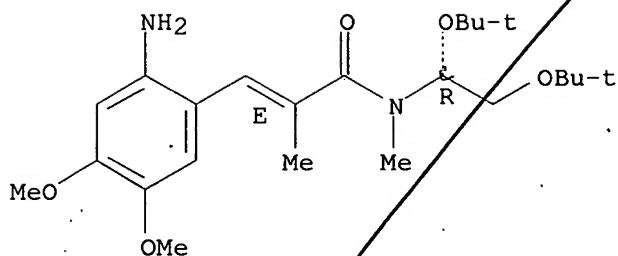
IT 296231-19-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(preparation of caged amino acids)

RN 296231-19-1 HCA

CN 2-Propenamide, 3-(2-amino-4,5-dimethoxyphenyl)-N-[(1R)-1,2-bis(1,1-dimethylethoxy)ethyl]-N,2-dimethyl-, (2E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



IC ICM C07C237-20
 ICS A61K031-197; A61K031-198; C07C233-46; G01N033-68
 CC 34-2 (Amino Acids, Peptides, and Proteins)
 Section cross-reference(s): 9
 IT 70249-96-6P 103260-74-8P 113387-36-3P 296230-57-4P
 296230-58-5P 296230-59-6P 296230-60-9P 296230-61-0P
 296230-62-1P 296230-63-2P 296230-64-3P 296230-65-4P
 296230-66-5P 296230-67-6P 296230-68-7P 296230-69-8P
 296230-70-1P 296230-71-2P 296230-72-3P 296230-76-7P
 296230-77-8P 296230-80-3P 296230-81-4P 296230-82-5P
 296230-86-9P 296230-88-1P 296230-90-5P 296230-93-8P
 296230-95-0P 296230-99-4P 296231-00-0P 296231-01-1P
 296231-02-2P 296231-03-3P 296231-04-4P 296231-06-6P
 296231-08-8P 296231-10-2P 296231-12-4P 296231-14-6P
 296231-16-8P **296231-19-1P** 296231-20-4P 296231-21-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (preparation of caged amino acids)

L65 ANSWER 11 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 133:173420 HCA

TITLE: Light, extruded pesticidal compositions
 containing a ceramic carrier for water surface
 application in paddy fields

INVENTOR(S): Takayanagi, Norikazu; Kimpura, Masaomi; Suzuki,
 Munehiro

PATENT ASSIGNEE(S): American Cyanamid Company, USA

SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000047044	A1	20000817	WO 2000-US3073	20000207

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR,
 CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,
 ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
 LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU,
 SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN,
 YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,

DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF,
 BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

CA 2361532 AA 20000817 CA 2000-2361532 200002
 07

AU 2000029833 A5 20000829 AU 2000-29833 200002
 07

AU 768396 B2 20031211
 BR 2000008120 A 20011106 BR 2000-8120 200002
 07

EP 1150562 A1 20011107 EP 2000-908506 200002
 07

EP 1150562 B1 20040428
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
 PT, IE, SI, LT, LV, FI, RO
 JP 2002536385 T2 20021029 JP 2000-598004 200002
 07

NZ 513715 A 20030530 NZ 2000-513715 200002
 07

AT 265137 E 20040515 AT 2000-908506 200002
 07

PT 1150562 T 20040730 PT 2000-908506 200002
 07

ES 2219315 T3 20041201 ES 2000-908506 200002
 07

EG 22636 A 20030531 EG 2000-147 200002
 08

TW 557199 B 20031011 TW 2000-89102180 200002
 10

BG 105862 A 20020531 BG 2001-105862 200108
 31

ZA 2001007438 A 20021217 ZA 2001-7438 200109
 10

PRIORITY APPLN. INFO.: US 1999-248859 A 199902
 11

WO 2000-US3073 W 200002
 07

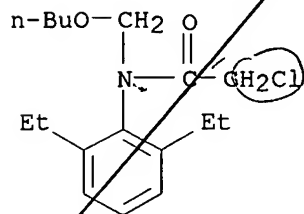
AB The light, extruded compns. comprise a pesticide, a light,
 extrudable, ceramic carrier and at least one surface active agent,
 and, optionally, a mineral carrier and a binder. The compds. are
 used for applying pesticides to the water surface of paddy rice
 fields.

IT 23184-66-9, Butachlor

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(herbicide in light, extruded pesticidal compns. containing ceramic
carrier for water surface application)

RN 23184-66-9 HCA

CN Acetamide, N-(butoxymethyl)-2-chloro-N-(2,6-diethylphenyl)- (9CI)
(CA INDEX NAME)



YC ICM A01N025-08

CC 5-4 (Agrochemical Bioregulators)

IT 133-06-2, Captan 1897-45-6, TPN 6980-18-3, Kasugamycin
14698-29-4, Oxolinic acid 17109-49-8, Edifenphos
17804-35-2, Benomyl 19408-46-9, Kasugamycin hydrochloride
23564-05-8, Thiophanatemethyl 26087-47-8, Iprobenfos 27355-22-2,
Fthalide 27605-76-1, Probenazole 36734-19-7, Iprodione
41814-78-2, Tricyclazole 50512-35-1, Isoprothiolane 50642-14-3,
Validamycin 55814-41-0, Mepronil 57369-32-1, Pyroquilone
57837-19-1, Metalaxyl 62865-36-5, Diclomezine 66063-05-6,
Pencycuron 66332-96-5, Flutolanil 68694-11-1, Triflumizole
76280-91-6, Tecloftalam 89269-64-7, Ferimzone 115852-48-7
133408-50-1, Metominostrobin

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(fungicide in light, extruded pesticidal compns. containing
ceramic carrier for water surface application)

IT 94-11-1 94-74-6, MCPA 94-75-7, 2,4-D, biological studies
94-80-4 709-98-8, Propanil 1014-70-6, Simetryn 1713-12-8
1713-15-1 1836-77-7, Chlornitrofen 1918-13-4, Chlorthiamid
1918-18-9, Swep 1928-43-4 2008-39-1 2039-46-5 2212-67-1,
Molinate 2453-96-5, MCPA 2569-01-9 2702-72-9 3653-48-3
5221-16-9 5742-19-8 7287-19-6, Prometryn 14214-89-2
19666-30-9, Oxadiazon 22936-75-0, Dimethametryn 23184-66-9
, Butachlor 24151-93-7, Piperophos 25057-89-0, Bentazone
25168-26-7 26544-20-7, MCPA-isooctyl 28249-77-6, Thiobencarb
32861-85-1, Chlormethoxynil 40487-42-1, Pendimethalin
42576-02-3, Bifenox 42609-52-9, Dymron 51218-49-6, Pretilachlor
52570-16-8, Naproanilide 58011-68-0, Pyrazolate 61432-55-1,
Dimepiperate 71561-11-0, Pyrazoxyfen 72731-35-2 73250-68-7,
Mefenacet 74712-19-9, Bromobutide 79540-50-4, Etobenzanid
82692-44-2, Benzofenap 83055-99-6, Bensulfuronmethyl 84496-56-0,
Clomeprop 85785-20-2, Esprocarb 87818-31-3, Cinmethylin
88678-67-5, Pyributicarb 93697-74-6, Pyrazosulfuronethyl
94593-91-6, Cinosulfuron 96491-05-3, Thenylchlor 97886-45-8,
Dithiopyr 110956-75-7, Pentoxazone 120162-55-2, Azimsulfuron
122008-85-9, Cyhalofopbutyl 122548-33-8, Imazosulfuron
125306-83-4, Cafenstrole 126801-58-9, Ethoxysulfuron
136849-15-5, Cyclosulfamuron 153197-14-9, Oxaziclomefone
158237-07-1, Fentrazamide 188061-45-2 288301-74-6

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(herbicide in light, extruded pesticidal compns. containing ceramic
carrier for water surface application)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN
THE RE FORMAT

L65 ANSWER 12 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 133:142534 HCA

TITLE: Synthesis of a self-crosslinking polymer and its
application in water-developable chemically
amplified **negative photoresist**

AUTHOR(S): Chen, Qi-Dao; Chen, Ming; Lin, Tian-Shu; Hong,
Xiao-Yin; Huang, Zhi-Qi; Hu, De-Fu

CORPORATE SOURCE: Department of Chemistry, Tsinghua University,
Beijing, 100084, Peop. Rep. China

SOURCE: Ganguang Kexue Yu Guang Huaxue (2000), 18(2),
155-159

CODEN: GKKHE9; ISSN: 1000-3231

PUBLISHER: Kexue Chubanshe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB A new kind of acid-sensitive polymer with $T_g = 95^\circ\text{C}$ and $M_n =$
7,625, $M_w = 25,013$ ($M_w/M_n = 3.28$) was synthesized by the co-polymerization
of styrene, N-(4-hydroxyphenyl) maleimide and
methylacrylamidoglycolate methylether (MAGME). This MAGME containing
co-polymer can be self-crosslinked via acid-catalyzed condensation
reaction when heated. A new kind of chemical amplified **neg.**
photoresist without crosslinking agent was studied using
this co-polymer as the base resin, which was developable in harmless
NaOH-H₂O solution. Diaryliodonium hexafluorophosphate was used in the
photoresist as the **photo-acid generator**
to supply the strong acid and phenothiazine was the photosensitizer.
The condition of photolithog. was preliminarily investigated.

IT 286477-89-2DP, hydrolyzed

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
engineered material use); PREP (Preparation); USES (Uses)

(Synthesis of self-crosslinking polymer and application in
water-developable chemical amplified **neg.**

photoresist)

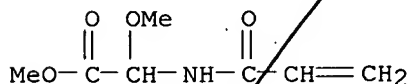
RN 286477-89-2 HCA

CN Acetic acid, methoxy[(1-oxo-2-propenyl)amino]-, methyl ester,
polymer with 1-[4-(acetyloxy)phenyl]-1H-pyrrole-2,5-dione and
ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 77402-03-0

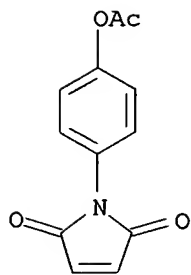
CMF C7 H11 N O4



CM 2

CRN 6637-46-3

CMF C12 H9 N O4



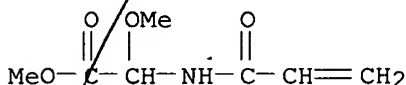
CM 3

CRN 100-42-5

CMF C8 H8

 $\text{H}_2\text{C}=\text{CH}-\text{Ph}$

IT 77402-03-0, Methylacrylamidoglycolate methylether
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (Synthesis of self-crosslinking polymer and application in
 water-developable chemical amplified **neg.**
photoresist)
 RN 77402-03-0 HCA
 CN Acetic acid, methoxy[(1-oxo-2-propenyl)amino]-, methyl ester (9CI)
 (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 Section cross-reference(s): 35, 38, 76
 ST crosslinking polymer water developable chem amplified **neg**
photoresist
 IT Photoresists
 (Synthesis of self-crosslinking polymer and application in
 water-developable chemical amplified **neg.**
photoresist)
 IT Polymerization
 (condensation; Synthesis of self-crosslinking polymer and
 application in water-developable chemical amplified **neg.**
photoresist)
 IT 92-84-2, Phenothiazine 61358-25-6
 RL: MOA (Modifier or additive use); TEM (Technical or engineered
 material use); USES (Uses)
 (Synthesis of self-crosslinking polymer and application in
 water-developable chemical amplified **neg.**
photoresist)
 IT 286477-89-2DP, hydrolyzed
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (Synthesis of self-crosslinking polymer and application in

water-developable chemical amplified **neg.**
photoresist)

IT 100-42-5, Styrene, reactions 108-31-6, 2,5-Furandione, reactions
123-30-8, 4-Aminophenol 7300-91-6, N-(4-Hydroxyphenyl) maleimide
77402-03-0, Methylacrylamidoglycolate methylether

RL: RCT (Reactant); RACT (Reactant or reagent)

(Synthesis of self-crosslinking polymer and application in
water-developable chemical amplified **neg.**

photoresist)

IT 6637-46-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)

(Synthesis of self-crosslinking polymer and application in
water-developable chemical amplified **neg.**

photoresist)

IT 1310-73-2, Sodium hydroxide, uses 7732-18-5, Water, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(Synthesis of self-crosslinking polymer and application in
water-developable chemical amplified **neg.**

photoresist)

L65 ANSWER 13 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 132:286212 HCA

TITLE: Cyclized copolymer of methacrylic anhydride and
an application to photoresist with
photoacid generator

AUTHOR(S): Takao, Yasuyuki; Miyagawa, Nobukazu; Takahara,
Shigeru; Yamaoka, Tsuguo

CORPORATE SOURCE: Department of Information and Image science,
Faculty of Engineering, Chiba University, Chiba,
263-8522, Japan

SOURCE: Journal of Photopolymer Science and Technology
(1999), 12(5), 769-772

CODEN: JSTEED; ISSN: 0914-9244

PUBLISHER: Technical Association of Photopolymers, Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The cyclized copolym. of methacrylic anhydride with
N-phenyldimethacrylamide and methacrylonitrile was carried out. The
polymer consists of six-membered cyclic acid anhydride and
five-membered imide ring. The cyclic acid anhydride was hydrolyzed
by generated acid catalyst from **photoacid**
generator (PAG). The hydrolyzed copolymer is dissolved in
an alkaline solution. The authors applied this copolymer with PAG to
photoresist based on the chemical amplified system and obtained good
patterns of pos.-tone image.

IT **263896-37-3P**, Methacrylic anhydride-methacrylonitrile-N-
phenyldimethacrylamide copolymer

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation);
TEM (Technical or engineered material use); PREP (Preparation); RACT
(Reactant or reagent); USES (Uses)

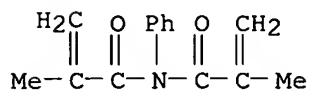
(cyclized copolymer of methacrylic anhydride its acid-induced
reaction and its application to chemical amplification photoresists)

RN 263896-37-3 HCA

CN 2-Propenoic acid, 2-methyl-, anhydride, polymer with
2-methyl-N-(2-methyl-1-oxo-2-propenyl)-N-phenyl-2-propenamide and
2-methyl-2-propenenitrile (9CI) (CA INDEX NAME)

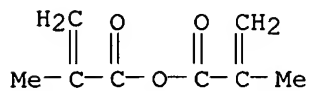
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CRN 7370-86-7
CMF C14 H15 N O2



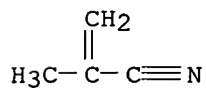
CM 2

CRN 760-93-0
CMF C8 H10 O3



CM 3

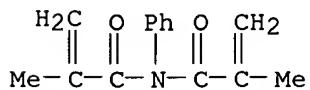
CRN 126-98-7
CMF C4 H5 N



IT **263896-39-5P**, Methacrylic anhydride-N-phenyldimethacrylamide
copolymer
RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)
(cyclized copolymn. of methacrylic anhydride with
N-phenyldimethacrylamide in design of resists for photolithog.
applications)
RN 263896-39-5 HCA
CN 2-Propenoic acid, 2-methyl-, anhydride, polymer with
2-methyl-N-(2-methyl-1-oxo-2-propenyl)-N-phenyl-2-propenamide (9CI)
(CA INDEX NAME)

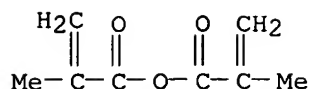
CM 1

CRN 7370-86-7
CMF C14 H15 N O2



CM 2

CRN 760-93-0
CMF C8 H10 O3



- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- IT Photoresists
(chemical amplification; cyclized copolymer of methacrylic anhydride its acid-induced reaction and its application to photoresist with **photoacid generator**)
- IT **263896-37-3P**, Methacrylic anhydride-methacrylonitrile-N-phenyldimethacrylamide copolymer
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(cyclized copolymer of methacrylic anhydride its acid-induced reaction and its application to chemical amplification photoresists)
- IT **263896-39-5P**, Methacrylic anhydride-N-phenyldimethacrylamide copolymer
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(cyclized copolymn. of methacrylic anhydride with N-phenyldimethacrylamide in design of resists for photolithog. applications)
- IT 104-15-4, 4-Toluenesulfonic acid, uses
RL: CAT (Catalyst use); USES (Uses)
(thermal reaction of cyclized copolymer of methacrylic anhydride with acid catalyst in relation to its application to photoresist with **photoacid generator**)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 14 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 132:187644 HCA

TITLE: Polymer, chemically amplified negative-working resist containing same, and resist pattern formation

INVENTOR(S): Iwasa, Shigeyuki; Maeda, Katsumi; Nakano, Kaichiro; Hasegawa, Etsuo

PATENT ASSIGNEE(S): NEC Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 35 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000063433	A2	20000229	JP 1998-229154	19980813
JP 3003680	B2	20000131	JP 1998-229154	19980813

PRIORITY APPLN. INFO.: 19980813

AB The title polymer has the general formula
 $[\text{CH}_2\text{CR}_1(\text{CO}_2\text{R}_2\text{CO}_2\text{H})]_x[\text{CH}_2\text{CR}_5(\text{CONHCH}_2\text{OR}_6)]_z$ (I),
 $[\text{CH}_2\text{CR}_3(\text{CO}_2\text{R}_4\text{OH})]_y[\text{CH}_2\text{CR}_5(\text{CONHCH}_2\text{OR}_6)]_z$ (II) or
 $[\text{CH}_2\text{CR}_1(\text{CO}_2\text{R}_2\text{CO}_2\text{H})]_x[\text{CH}_2\text{CR}_3(\text{CO}_2\text{R}_4\text{OH})]_y[\text{CH}_2\text{CR}_5(\text{CONHCH}_2\text{OR}_6)]_z$ (III)
(R1, R3, R5 = H or Me; R2, R4 = C7-18 alkylene having a cross-linked
cyclic hydrocarbon group; R6 = H or C1-12 alkyl; $x + z = 1$, $0 < x < 1$, and $0 < z < 1$ in I; $y + z = 1$, $0 < y < 1$, and $0 < z < 1$ in II; $x + y + z = 1$, $0 < x < 1$, $0 < y < 1$, and $0 < z < 1$ in III) and a weight
average mol. weight of 1000-500,000. The title resist comprises the
polymer and a **photoacid generator** and is coated
on a substrate, patternwise exposed to light of wavelength 180-220
nm, heat-treated, and developed to form a resist pattern. The
polymer shows high transparency toward short wavelength light of
 ≤ 220 nm such as ArF excimer laser beams and improved dry etch
resistance.

IT 259528-63-7P 259528-65-9P 259528-66-0P
259528-67-1P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered
material use); PREP (Preparation); USES (Uses)
(chemical amplification-type photoresist containing acrylic polymer and
photoacid generator)

RN 259528-63-7 HCA

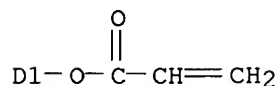
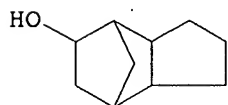
CN 1,4:5,8-Dimethanonaphthalene-2-carboxylic acid, decahydro-6(or
7)-[(1-oxo-2-propenyl)oxy]-, polymer with N-(hydroxymethyl)-2-
propenamide and octahydrohydroxy-4,7-methano-1H-inden-1(or 2)-yl
2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 217654-90-5

CMF C13 H18 O3

CCI IDS

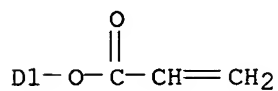
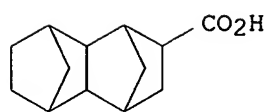


CM 2

CRN 195398-52-8

CMF C16 H20 O4

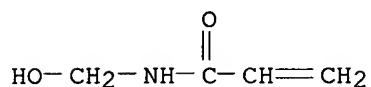
CCI IDS



CM 3

CRN 924-42-5

CMF C4 H7 N O2



RN 259528-65-9 HCA

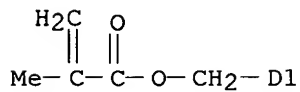
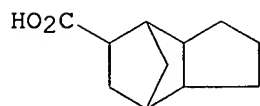
CN 4,7-Methano-1H-indene-5-carboxylic acid, octahydro[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-, polymer with N-(hydroxymethyl)-2-propenamide and octahydro-5(or 6)-hydroxy-4,7-methano-1H-inden-1(2 or 3)-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 259528-64-8

CMF C16 H22 O4

CCI IDS

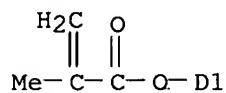
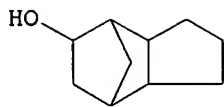


CM 2

CRN 220138-05-6

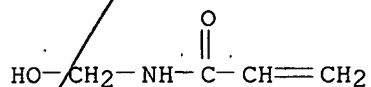
CMF C14 H20 O3

CCI IDS



CM 3

CRN 924-42-5
CMF C4 H7 N O2

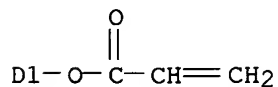
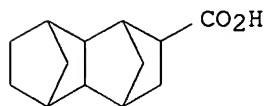


RN 259528-66-0 HCA

CN 1,4:5,8-Dimethanonaphthalene-2-carboxylic acid, decahydro-6(or 7)-[(1-oxo-2-propenyl)oxy]-, polymer with N-(methoxymethyl)-2-propenamide (9CI) (CA INDEX NAME)

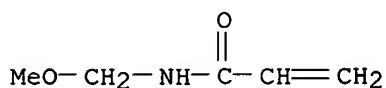
CM 1

CRN 195398-52-8
CMF C16 H20 O4
CCI IDS



CM 2

CRN 3644-11-9
CMF C5 H9 N O2



RN 259528-67-1 HCA

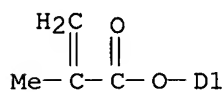
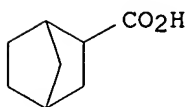
CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 5(or 6)-[(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with N-(methoxymethyl)-2-propenamide (9CI)
(CA INDEX NAME)

CM 1

CRN 210641-03-5

CMF C12 H16 O4

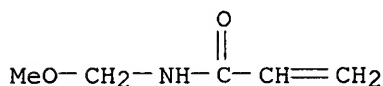
CCI IDS



CM 2

CRN 3644-11-9

CMF C5 H9 N O2



IC ICM C08F020-18

ICS C08F020-28; C08F020-36; C08L033-06; C08L033-26; G03F007-038;
H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)

Section cross-reference(s): 38

ST chem amplification resist **photoacid generator**;

alicyclic acrylic polymer **neg photoresist**

IT **Negative photoresists**

(chemical amplification-type photoresist containing acrylic polymer and
photoacid generator)

IT 259528-63-7P 259528-65-9P 259528-66-0P

259528-67-1P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered
material use); PREP (Preparation); USES (Uses)

(chemical amplification-type photoresist containing acrylic polymer and
photoacid generator)

IT 84563-54-2 171292-12-9

RL: TEM (Technical or engineered material use); USES (Uses)

(chemical amplification-type photoresist containing acrylic polymer and
photoacid generator)

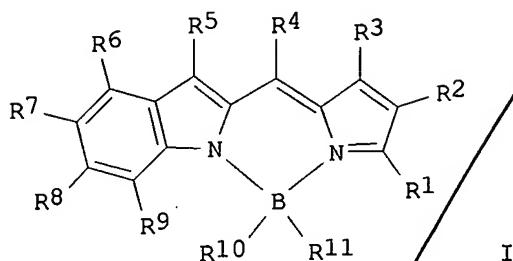
L65 ANSWER 15 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 132:173401 HCA

TITLE: Positive-working visible ray-sensitive resin
composition and its usage

INVENTOR(S): Imai, Genji; Kogure, Hideo; Ogiso, Akira;
Misawa, Tsutayoshi; Nishimoto, Taizo; Tsukahara,
Hiroshi; Takuma, Keisuke
PATENT ASSIGNEE(S): Kansai Paint Co., Ltd., Japan; Mitsui Chemicals
Inc.
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000056458	A2	20000225	JP 1998-221922	19980805
PRIORITY APPLN. INFO.:			JP 1998-221922	19980805
OTHER SOURCE(S):		MARPAT 132:173401		
GI				



AB The title resin composition contains a pos.-working visible ray-sensitive resin and a photosensitizer of a benzopyrromethene compound I (R1-3, R5-9 = H, halo, NO₂, CN, OH, NH₂, CO₂H, SO₃H, alkyl, halogenoalkyl, alkoxyalkyl, alkoxy, alkoxyalkoxy, aryloxy, acyl, alkoxy carbonyl, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, alkylcarbonylamino, arylcarbonylamino, arylaminocarbonyl, aryloxy carbonyl, aralkyl, aryl, heteroaryl, alkylthio, arylthio, alkenyloxy carbonyl, aralkyloxy carbonyl, alkoxy carbonylalkoxy carbonyl, alkylcarbonylalkoxy carbonyl, mono(hydroxyalkyl)aminocarbonyl, di(hydroxyalkyl)aminocarbonyl, mono(alkoxyalkyl)aminocarbonyl, di(alkoxyalkyl)aminocarbonyl, alkenyl, alkylamino, dialkylamino, mono(hydroxyalkyl)amino, di(hydroxyalkyl)amino; R4 = H, CN, alkyl, aralkyl, aryl, heteroaryl, alkenyl; R10, R11 = halo, alkyl, aralkyl, aryl, heteroaryl, alkoxy, alkoxyalkoxy). A composition for pos.-working visible ray-sensitive materials comprising the resin composition and a solvent and a pos.-working resist material containing the resin composition on a substrate are also claimed. The composition shows high sensitivity toward visible rays, especially Ar lasers and YAG laser second harmonics and improved

storage stability.

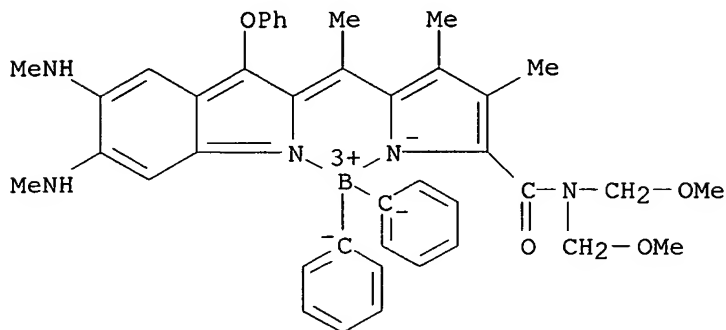
IT 250734-22-6 250734-28-2

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(visible ray-sensitive resist composition containing benzopyrromethene boron complex as sensitizer)

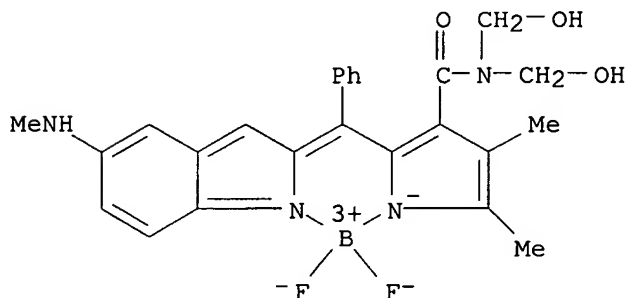
RN 250734-22-6 HCA

CN Boron, [5-[1-[5,6-bis(methylamino)-3-phenoxy-2H-indol-2-ylidene-κN]ethyl]-N,N-bis(methoxymethyl)-3,4-dimethyl-1H-pyrrole-2-carboxamidato-κN1]diphenyl-, (T-4)- (9CI) (CA INDEX NAME)



RN 250734-28-2 HCA

CN Boron, [N,N-bis(hydroxymethyl)-4,5-dimethyl-2-[[5-(methylamino)-2H-indol-2-ylidene-κN]phenylmethyl]-1H-pyrrole-3-carboxamidato-κN1]difluoro-, (T-4)- (9CI) (CA INDEX NAME)



IC ICM G03F007-029

ICS G03F007-004; G03F007-039; C08F002-50

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 85342-62-7, NAI 105

RL: TEM (Technical or engineered material use); USES (Uses)

(photoacid generator; visible ray-sensitive resist composition containing benzopyrromethene boron complex as sensitizer)

IT	244172-55-2	250733-86-9	250733-87-0	250733-88-1	250733-89-2
	250733-90-5	250733-91-6	250733-92-7	250733-93-8	250733-94-9
	250733-95-0	250733-96-1	250733-97-2	250733-98-3	250733-99-4
	250734-00-0	250734-01-1	250734-02-2	250734-03-3	250734-04-4
	250734-05-5	250734-06-6	250734-07-7	250734-08-8	250734-09-9
	250734-11-3	250734-12-4	250734-13-5	250734-14-6	250734-15-7
	250734-16-8	250734-17-9	250734-18-0	250734-19-1	250734-20-4

250734-21-5 **250734-22-6** 250734-24-8 250734-25-9
 250734-26-0 **250734-28-2** 250734-29-3 250734-30-6
 250734-31-7 250734-32-8 250734-33-9 250734-34-0 255905-82-9
 255905-83-0 256224-65-4

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(visible ray-sensitive resist composition containing benzopyrromethene boron complex as sensitizer)

L65 ANSWER 16 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 132:173398 HCA

TITLE: Positive-working visible ray-sensitive resin composition containing benzopyrromethene boron complex sensitizer and its usage

INVENTOR(S): Imai, Genji; Kogure, Hideo; Ogiso, Akiya; Misawa, Tsutayoshi; Nishimoto, Taizo; Tsukahara, Hiroshi; Takuma, Keisuke

PATENT ASSIGNEE(S): Kansai Paint Co., Ltd., Japan; Mitsui Chemicals Inc.

SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

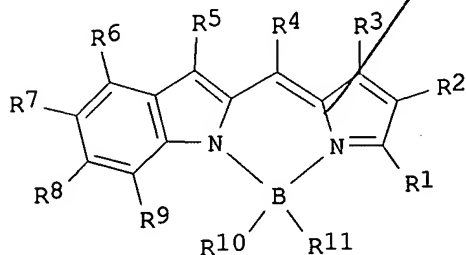
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000056450	A2	20000225	JP 1998-221923	19980805
			JP 1998-221923	19980805

PRIORITY APPLN. INFO.:

OTHER SOURCE(S): MARPAT 132:173398
 GI



I

AB The title resin composition, used under safelight having a maximal wavelength in the range of 500-620 nm and large spectral luminous efficiency for an individual observer, contains a pos.-working visible ray-sensitive resin and a photosensitizer of a benzopyrromethene compound I (R1-3, R5-9 = H, halo, NO2, CN, OH, NH2, CO2H, SO3H, alkyl, halogenoalkyl, alkoxyalkyl, alkoxy, alkoxyalkoxy, aryloxy, acyl, alkoxy carbonyl, aminocarbonyl, alkylaminocarbonyl,

dialkylaminocarbonyl, alkylcarbonylamino, arylcarbonylamino, arylaminocarbonyl, aryloxy carbonyl, aralkyl, aryl, heteroaryl, alkylthio, arylthio, alkenyloxy carbonyl, aralkyloxy carbonyl, alkoxy carbonyl alkoxy carbonyl, alkylcarbonyl alkoxy carbonyl, mono(hydroxyalkyl)aminocarbonyl, di(hydroxyalkyl)aminocarbonyl, mono(alkoxyalkyl)aminocarbonyl, di(alkoxyalkyl)aminocarbonyl, alkenyl, alkylamino, dialkylamino, mono(hydroxyalkyl)amino, di(hydroxyalkyl)amino; R4 = H, CN, alkyl, aralkyl, aryl, heteroaryl, alkenyl; R10, R11 = halo, alkyl, aralkyl, aryl, heteroaryl, alkoxy, alkoxyalkoxy) and the absorbance of the unexposed coating film made of the composition is ≤ 0.5 in the range of the maximal wavelength of the above safelight ± 30 nm. A composition for pos.-working visible ray-sensitive materials comprising the resin composition and a solvent and a pos.-working visible ray-sensitive material containing the resin composition on a substrate are also claimed. The composition shows high sensitivity toward visible rays and improved processability under safelight.

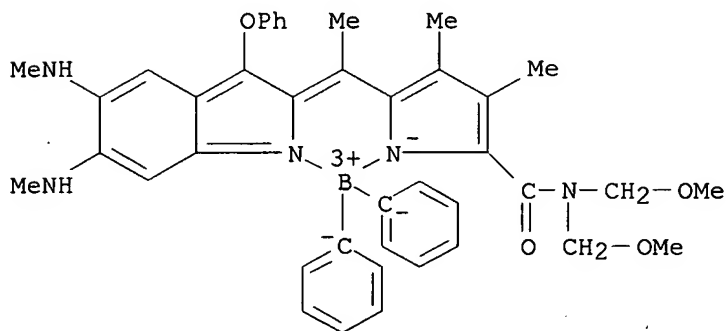
IT 250734-22-6 250734-28-2

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(visible ray-sensitive resist composition containing benzopyrromethene boron complex as sensitizer)

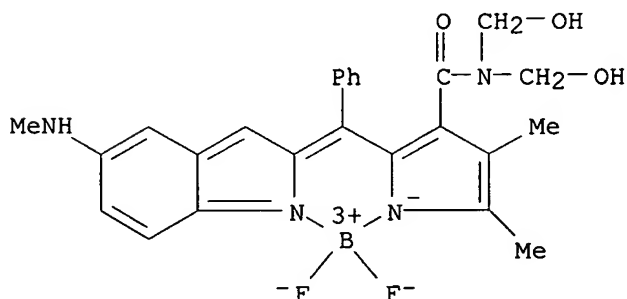
RN 250734-22-6 HCA

CN Boron, [5-[1-[5,6-bis(methylamino)-3-phenoxy-2H-indol-2-ylidene- κ N]ethyl]-N,N-bis(methoxymethyl)-3,4-dimethyl-1H-pyrrole-2-carboxamidato- κ N1]diphenyl-, (T-4)- (9CI) (CA INDEX NAME)



RN 250734-28-2 HCA

CN Boron, [N,N-bis(hydroxymethyl)-4,5-dimethyl-2-[[5-(methylamino)-2H-indol-2-ylidene- κ N]phenylmethyl]-1H-pyrrole-3-carboxamidato- κ N1]difluoro-, (T-4)- (9CI) (CA INDEX NAME)



IC ICM G03F007-004

ICS G03F007-029; G03F007-039; C08F002-50
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 38
IT 85342-62-7, NAI 105
RL: TEM (Technical or engineered material use); USES (Uses)
(photoacid generator; visible ray-sensitive
resist composition containing benzopyrromethene boron complex as
sensitizer)
IT 244172-55-2 250733-86-9 250733-87-0 250733-88-1 250733-89-2
250733-90-5 250733-91-6 250733-92-7 250733-93-8 250733-94-9
250733-95-0 250733-96-1 250733-97-2 250733-98-3 250733-99-4
250734-00-0 250734-01-1 250734-02-2 250734-03-3 250734-04-4
250734-05-5 250734-06-6 250734-07-7 250734-08-8 250734-09-9
250734-11-3 250734-12-4 250734-13-5 250734-14-6 250734-15-7
250734-16-8 250734-17-9 250734-18-0 250734-19-1 250734-20-4
250734-21-5 250734-22-6 250734-24-8 250734-25-9
250734-26-0 250734-28-2 250734-29-3 250734-30-6
250734-31-7 250734-32-8 250734-33-9 250734-34-0 255905-82-9
255905-83-0 256224-65-4
RL: MOA (Modifier or additive use); TEM (Technical or engineered
material use); USES (Uses)
(visible ray-sensitive resist composition containing benzopyrromethene
boron complex as sensitizer)

L65 ANSWER 17 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 132:158929 HCA

TITLE: Positive-working visible ray-sensitive resin
composition containing dipyrromethene boron
complex sensitizer and its usage

INVENTOR(S): Imai, Genji; Kogure, Hideo; Ogiso, Akira;
Misawa, Tsutayoshi; Mishimoto, Taizo; Tsukahara,
Hiroshi; Takuma, Keisuke

PATENT ASSIGNEE(S): Kansai Paint Co., Ltd., Japan; Mitsui Chemicals
Inc.

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAE

DOCUMENT TYPE: Patent

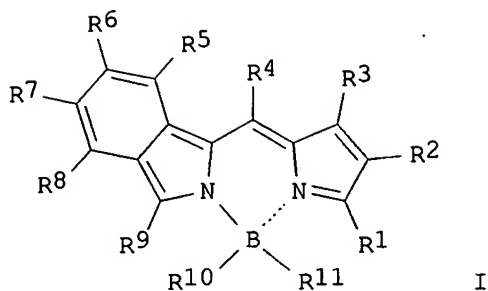
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000047384	A2	20000218	JP 1998-211175	199807 27
PRIORITY APPLN. INFO.			JP 1998-211175	199807 27

OTHER SOURCE(S): MARPAT 132:158929
GI



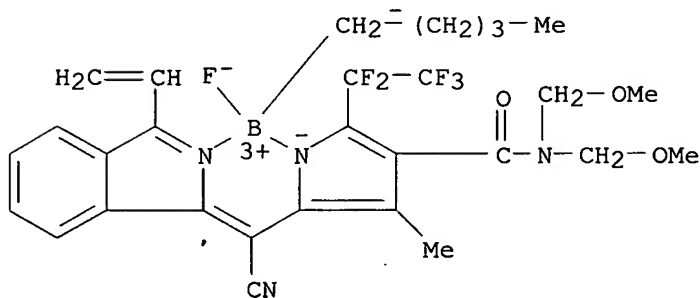
AB The title resin composition contains a pos.-working visible ray-sensitive resin and a photosensitizer of an organic B compound I (R1-3, R5-9 = H, halo, NO₂, CN, OH, NH₂, CO₂H, SO₃H, alkyl, halogenoalkyl, alkoxy, alkoxyalkoxy, aryloxy, acyl, alkoxy carbonyl, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, alkylcarbonylamino, arylcarbonylamino, arylaminocarbonyl, aryloxy carbonyl, aralkyl, aryl, heteroaryl, alkylthio, arylthio, alkenyloxy carbonyl, aralkyloxy carbonyl, alkoxy carbonyl alkoxy carbonyl, alkylcarbonyl alkoxy carbonyl, mono(hydroxyalkyl) aminocarbonyl, di(hydroxyalkyl) aminocarbonyl, mono(alkoxyalkyl) aminocarbonyl, di(alkoxyalkyl) aminocarbonyl, alkenyl; R4 = H, CN, alkyl, aralkyl, aryl, heteroaryl, alkenyl; R10, R11 = halo, alkyl, aralkyl, aryl, heteroaryl, alkoxy, alkoxyalkoxy). A composition for pos.-working visible ray-sensitive materials comprising the resin composition and a solvent and a pos.-working resist material containing the resin composition on a substrate are also claimed. The composition shows good storage stability and high sensitivity toward visible rays, especially Ar lasers and YAG laser second harmonics.

IT 253801-62-6

RL: TEM (Technical or engineered material use); USES (Uses)
(pos. photoresist composition containing dipyrromethene derivative boron complex as sensitizer)

RN 253801-62-6 HCA

CN Boron, [5-(cyano(3-ethenyl-1H-isoindol-1-ylidene-κN)methyl)-N,N-bis(methoxymethyl)-4-methyl-2-(pentafluoroethyl)-1H-pyrrole-3-carboxamidato-κN1]fluoropentyl-, (T-4)- (9CI) (CA INDEX NAME)



IC ICM G03F007-039

ICS C08F002-50; G03F007-004; G03F007-029; G03F007-20; C07F005-02

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 85342-62-7, NAI 105

RL: TEM (Technical or engineered material use); USES (Uses)

(photo-acid generator; pos.

photoresist composition containing dipyrromethene derivative boron complex as sensitizer)

IT 24979-70-2, Poly(p-hydroxystyrene) 24979-70-2D,
Poly(p-hydroxystyrene), tetrahydroxypyranyl ethers 25053-96-7,
o-Cresol-formaldehyde copolymer 108528-66-1 216450-71-4
216450-72-5 216450-73-6 216450-74-7 216450-75-8 216450-76-9
216450-77-0 216450-78-1 216450-79-2 216450-80-5 216450-81-6
216450-82-7 216450-83-8 216450-84-9 216450-85-0 216450-86-1
216450-87-2 216450-89-4 216450-91-8 216450-93-0 216450-95-2
216450-97-4 216450-99-6 216451-01-3 216451-03-5 216451-04-6
216451-05-7 216451-06-8 216451-07-9 223252-77-5 223252-79-7
223563-99-3 223564-00-9 223564-01-0 223564-02-1 223564-03-2
223564-04-3 223564-05-4 223564-06-5 223564-07-6 223564-08-7
223564-09-8 223564-10-1 223564-11-2 223564-12-3 223564-13-4
223564-14-5 223564-15-6 223564-17-8 223564-19-0 223564-20-3
223564-21-4 223564-22-5 253801-62-6 253801-63-7
253801-64-8

RL: TEM (Technical or engineered material use); USES (Uses)

(pos. photoresist composition containing dipyrromethene derivative boron complex as sensitizer)

L65 ANSWER 18 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 132:130023 HCA

TITLE: Positive-working visible ray-sensitive resin
composition containing dipyrromethene boron
complex sensitizer and its usage

INVENTOR(S): Imai, Genji; Kogure, Hideo; Ogiso, Akira;
Misawa, Tsutayoshi; Nishimoto, Taizo; Tsukahara,
Hiroshi; Takuma, Keisuke

PATENT ASSIGNEE(S): Kansai Paint Co., Ltd., Japan; Mitsui Chemicals
Inc.

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

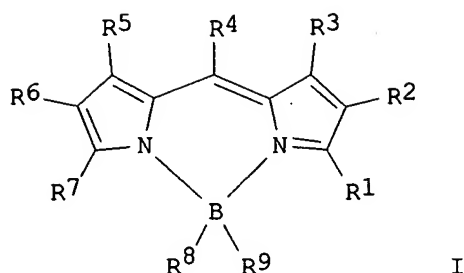
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000029213	A2	20000128	JP 1998-200446	199807 15
			JP 1998-200446	199807 15

PRIORITY APPLN. INFO.:

OTHER SOURCE(S): MARPAT 132:130023
GI



AB The title resin composition contains a pos.-working visible ray-sensitive resin and, as a photosensitizer, an organic B compound I [R1-3, R5-7 = H, halo, NO₂, CN, OH, NH₂, CO₂H, SO₃H, alkyl, halogenoalkyl, alkoxyalkyl, alkoxy, alkoxyalkoxy, alkoxyalkoxyalkoxy, aryloxy, aralkyloxy, acyl, alkoxyacetyl, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, alkylcarbonylamino, arylcarbonylamino, arylaminocarbonyl, aryloxyacetyl, aralkyl, aryl, heteroaryl, alkylthio, arylthio, alkenyloxyacetyl, aralkyloxyacetyl, alkoxyacetylalkoxyacetyl, alkylcarbonylalkoxyacetyl, mono(hydroxyalkyl)aminocarbonyl, di(hydroxyalkyl)aminocarbonyl, mono(alkoxyalkyl)aminocarbonyl, di(alkoxyalkyl)aminocarbonyl, alkenyl, ≥1 of R1-3 and R5-7 is alkoxy, alkoxyalkoxy, aryloxy or aralkyloxy; R4 = H, CN, alkyl, aralkyl, aryl, heteroaryl, alkenyl; R8, R9 = halo, alkyl, aralkyl, aryl, heteroaryl, alkoxy, alkoxyalkoxy, alkoxyalkoxyalkoxy, halogenoalkyl, alkylthioalkyl, dialkylaminoalkyl, alkylthioalkoxy, dialkylaminoalkoxy, dialkylaminoalkoxyalkoxy, alkylthio, alkoxyalkylthio, alkylthioalkylthio, dialkylaminoalkylthio, aralkyloxy, aryloxy, arylthio, heteroaryloxy, heteroarylthio, when R8 = R9 = halo, R1-3 and R5-7 ≠ alkenyl]. A composition for pos.-working photosensitive materials comprising the above composition and a solvent and a pos.-working resist material containing the above composition on a substrate are also claimed. The composition shows high sensitivity toward visible rays, especially Ar lasers and YAG laser second harmonics and improved storage stability.

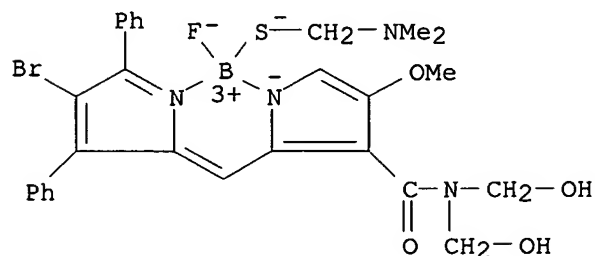
IT 223790-73-6 223790-75-8

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

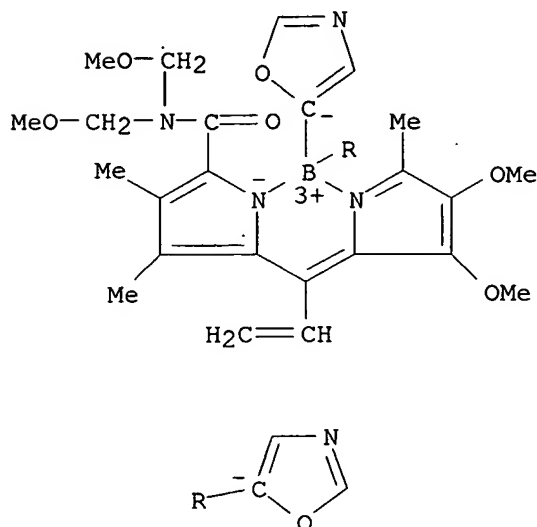
(pos.-working visible ray-sensitive resin composition containing dipyrromethene boron complex sensitizer)

RN 223790-73-6 HCA

CN Boron, [2-[(4-bromo-3,5-diphenyl-2H-pyrrol-2-ylidene-κN)methyl]-N,N-bis(hydroxymethyl)-4-methoxy-1H-pyrrole-3-carboxamidato-κN1][(dimethylamino)methanethiolato-κS]fluoro-, (T-4)- (9CI) (CA INDEX NAME)



RN 223790-75-8 HCA
 CN Boron, [5-[1-(3,4-dimethoxy-5-methyl-2H-pyrrol-2-ylidene-κN)-2-propenyl]-N,N-bis(methoxymethyl)-3,4-dimethyl-1H-pyrrole-2-carboxamidato-κN1]bis(5-oxazolyl)-, (T-4)- (9CI) (CA INDEX NAME)



IC ICM G03F007-039
 ICS C08F002-50; G03F007-004; G03F007-029; C07F005-02
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 IT 85342-62-7, NAI 105
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photo-acid generator; pos.-working
 visible ray-sensitive resin composition containing dipyrromethene boron
 complex sensitizer)
 IT 223790-47-4 223790-49-6 223790-50-9 223790-51-0 223790-52-1
 223790-53-2 223790-54-3 223790-55-4 223790-56-5 223790-57-6
 223790-58-7 223790-59-8 223790-60-1 223790-61-2 223790-62-3
 223790-63-4 223790-64-5 223790-65-6 223790-66-7 223790-67-8
 223790-68-9 223790-69-0 223790-70-3 223790-71-4 223790-72-5
 223790-73-6 223790-74-7 223790-75-8
 223790-76-9 223790-77-0 223790-78-1 223790-79-2 223790-80-5
 223790-82-7 223790-83-8 223790-84-9 223790-85-0 223790-86-1
 252846-96-1 252847-10-2 252847-13-5 252847-14-6
 RL: MOA (Modifier or additive use); TEM (Technical or engineered
 material use); USES (Uses)
 (pos.-working visible ray-sensitive resin composition containing
 dipyrromethene boron complex sensitizer)

L65 ANSWER 19 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 132:71363 HCA

TITLE: Visible ray-curing resin composition having good
 processability under safelight and its usage

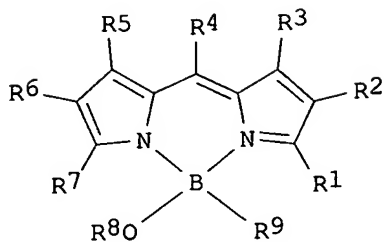
INVENTOR(S): Imai, Genji; Kogure, Hideo; Ogiso, Akira;
 Misawa, Tsutayoshi; Nishimoto, Taizo; Tsukahara,
 Hiroshi; Takuma, Keisuke

PATENT ASSIGNEE(S): Kansai Paint Co., Ltd., Japan; Mitsui Chemicals

SOURCE: Inc.
Jpn. Kokai Tokkyo Koho, 25 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11352686	A2	19991224	JP 1998-165044	19980612
SG 93820	A1	20030121	SG 1998-2960	19980811
PRIORITY APPLN. INFO.:			JP 1997-217721	A 19970812
			JP 1998-102794	A 19980414
			JP 1998-124947	A 19980507
			JP 1998-159493	A 19980608
			JP 1998-159494	A 19980608
			JP 1998-165044	A 19980612
			JP 1998-165045	A 19980612

OTHER SOURCE(S): MARPAT 132:71363
GI



I

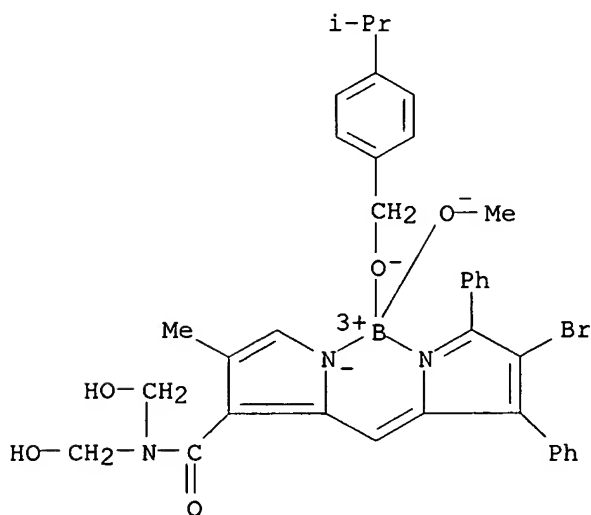
AB The title resin composition, used under irradiation using safelight with high spectral luminous efficiency for an individual observer having a maximal wavelength in the range of 500-620 nm, contains (a) a photo-curing resin, (b) a photoreaction initiator, and (c) a photosensitizer containing ≥ 1 dipyrromethene-B complex I [R1-3, R5-7 = H, halo, NO₂, CN, OH, NH₂, CO₂H, SO₃H, alkyl, halogenoalkyl, alkoxyalkyl, acyl, alkoxyacetyl, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, alkylcarbonylamino, arylcarbonylamino, arylaminocarbonyl, aryloxyacetyl, aralkyl, aryl, heteroaryl, alkylthio, arylthio, alkenyloxyacetyl, alkoxyloxyacetyl, alkoxyacetylalkoxyacetyl, alkylcarbonylalkoxyacetyl, mono(hydroxyalkyl)aminocarbonyl, di(hydroxyalkyl)aminocarbonyl, mono(alkoxyalkyl)aminocarbonyl, di(alkoxyalkyl)aminocarbonyl, alkenyl; R4 = H, CN, alkyl, aralkyl, aryl, heteroaryl, alkenyl; R8 = alkyl, aryl, aralkyl; R9 = halo, alkoxy, aryloxy, aralkyloxy] and the absorbance of the unexposed coating made of the composition is ≤ 0.5 in the range of the above safelight maximal wavelength ± 30 nm. A visible ray-curing composition and a material containing the resin composition and a solvent are also claimed. The resin composition shows high sensitivity toward visible rays and improved processability under safelight.

IT 250372-83-9 250372-87-3

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(photoresist composition containing dipyrromethene boron complex as photosensitizer)

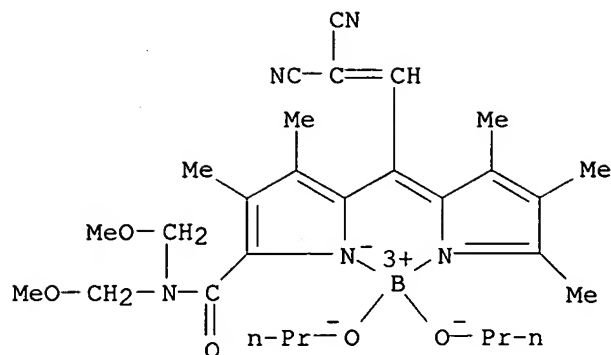
RN 250372-83-9 HCA

CN Boron, [2-[(4-bromo-3,5-diphenyl-2H-pyrrol-2-ylidene- κ N)methyl]-N,N-bis(hydroxymethyl)-4-methyl-1H-pyrrole-3-carboxamidato- κ N1]methoxy[4-(1-methylethyl)benzenemethanolato]-, (T-4)- (9CI) (CA INDEX NAME)



RN 250372-87-3 HCA

CN Boron, [5-[3,3-dicyano-1-(3,4,5-trimethyl-2H-pyrrol-2-ylidene- κ N)-2-propenyl]-N,N-bis(methoxymethyl)-3,4-dimethyl-1H-pyrrole-2-carboxamidato- κ N1]dipropoxy-, (T-4)- (9CI) (CA INDEX NAME)



IC ICM G03F007-029
ICS C07F005-02; C08F002-50
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35
IT 85342-62-7
RL: CAT (Catalyst use); USES (Uses)
(photo-acid generator; photoresist composition containing dipyrromethene boron complex as photosensitizer)

IT 250372-46-4 250372-48-6 250372-49-7 250372-50-0 250372-51-1
250372-52-2 250372-53-3 250372-54-4 250372-55-5 250372-56-6
250372-58-8 250372-59-9 250372-61-3 250372-63-5 250372-65-7
250372-66-8 250372-68-0 250372-69-1 250372-71-5 250372-72-6
250372-73-7 250372-74-8 250372-75-9 250372-77-1 250372-79-3
250372-81-7 **250372-83-9** 250372-85-1 **250372-87-3**
250372-88-4 250372-90-8 250372-92-0 250372-94-2 250372-95-3
250372-96-4 250372-97-5 250372-99-7 250373-01-4 250373-03-6
250373-05-8 253169-80-1 253169-81-2 253169-82-3 253169-83-4
253169-84-5
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(photoresist composition containing dipyrromethene boron complex as photosensitizer)

L65 ANSWER 20 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 131:358130 HCA

TITLE: Chemically amplified negative-tone resist using novel acryl polymer for 193-nm lithography

AUTHOR(S): Hada, Hideo; Iwai, Takeshi; Nakayama, Toshimasa

CORPORATE SOURCE: Adv. Mater. Dev. Div., Tokyo Ohka Kogyo Co., Ltd., Kanagawa, Japan

SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (1999), 3678(Pt. 1, Advances in Resist Technology and Processing XVI), 676-683

CODEN: PSISDG; ISSN: 0277-786X

PUBLISHER: SPIE-The International Society for Optical Engineering

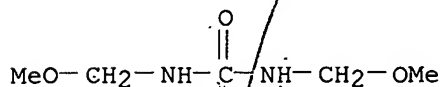
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Methacrylic acid-Et α -hydroxymethyl acrylate copolymer was applied in 193 nm chemical amplified neg.-tone resist. The ester and alc. group in the polymer contribute to an intramol. and/or intermol. hybrid crosslinking reactions. In an intramol. crosslink reaction, the ester group reacts with a neighboring hydroxymethyl

group within the polymer chain. As a result, a lactone group is produced in the main polymer chain. In an intermol. crosslink reaction, the ester group reacts with the hydroxymethyl group of another polymer chain to form an ester chain. In this reaction, the polymer is densely crosslinked and fine resist pattern is obtained without swelling problem. The optimized resist composition contains the above polymer, a **photoacid generator** and a small amount of a crosslinker. Under conventional illumination condition, 180 nm line and space pattern are achieved without any kind of swelling problem. The sensitivity is 40 mJ/cm² with the standard developer, NMD-3 2.38 percent.

IT 141-07-1, 1,3-Bis(methoxymethyl)urea
 RL: MOA (Modifier or additive use); USES (Uses)
 (crosslinker; chemical amplified neg.-tone resist using methacrylic acid-Et α -hydroxymethyl acrylate copolymer for 193-nm lithog.)
 RN 141-07-1 HCA
 CN Urea, N,N'-bis(methoxymethyl)- (9CI) (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT **Negative photoresists**
 (chemical amplified; lithog. characterization of methacrylic acid-Et α -hydroxymethyl acrylate copolymer for 193-nm lithog.)

IT 141-07-1, 1,3-Bis(methoxymethyl)urea 4356-60-9
 15968-37-3 17464-88-9

RL: MOA (Modifier or additive use); USES (Uses)
 (crosslinker; chemical amplified neg.-tone resist using methacrylic acid-Et α -hydroxymethyl acrylate copolymer for 193-nm lithog.)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT

L65 ANSWER 21 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 130:229992 HCA

TITLE: **Negative-working photoresist**
 composition for short-wavelength light and
 method for fabricating printed circuit using the
 same

INVENTOR(S): Iwasa, Shigeyuki; Maeda, Katsumi; Nakano,
 Kaichiro; Hasegawa, Etsuo

PATENT ASSIGNEE(S): Nec Corp., Japan

SOURCE: Ger. Offen., 28 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
DE 19838650	A1	19990401	DE 1998-19838650	

JP 11133607	A2	19990521	JP 1998-23206	199808 25
JP 3055617	B2	20000626		199802 04
TW 512256	B	20021201	TW 1998-87113092	
US 6074801	A	20000613	US 1998-140652	199808 07
CN 1209570	A	19990303	CN 1998-117484	199808 26
PRIORITY APPLN. INFO.:		JP 1997-231344	A	199808 27
		JP 1998-23206	A	199708 27
				199802 04

OTHER SOURCE(S): MARPAT 130:229992

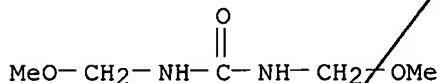
AB The **neg.-working photoresist** composition comprises a polymer containing a repeating unit $-\text{CH}_2-\text{C}(\text{COOR}_2\text{COOH})\text{R}_1-$ [$\text{R}_1 = \text{H}, \text{Me}; \text{R}_2 = \text{C}_7\text{-18-alkylene}$] and having a weight average mol. weight of 1,000-500,000, a crosslinking agent containing a functional group $-\text{OC-N-CH}_2\text{OR}_8$ [$\text{R}_8 = \text{H}, \text{C}_1\text{-6-alkyl}, \text{C}_3\text{-6-oxoalkyl}$], and a **photoacid generator**. The photoresist composition is especially suitable for manufacturing DRAMs using 180-220 nm ArF excimer lasers.

IT 141-07-1

RL: TEM (Technical or engineered material use); USES (Uses)
(**neg.-working photoresist** composition for short-wave light comprising)

RN 141-07-1 HCA

CN Urea, N,N'-bis(methoxymethyl)- (9CI) (CA INDEX NAME)



IC ICM G03F007-038

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **neg working UV photoresist** compn printed circuit
DRAM crosslinker

IT Memory devices

(DRAM (dynamic random access); **neg.-working photoresist** composition for short-wave light and method for fabricating printed circuit board using the same)

IT Photolithography

(UV; **neg.-working photoresist** composition for short-wave light and method for fabricating printed circuit board using the same)

IT **Negative photoresists**

Printed circuits

(**neg.-working photoresist** composition for

short-wave light and method for fabricating printed circuit board using the same)

IT 141-07-1 4356-60-9 17464-88-9 34684-40-7 66003-78-9,
Triphenylsulfonium trifluoromethanesulfonate 138529-81-4,
Bis(cyclohexylsulfonyl)diazomethane 157959-61-0,
Bis(tert-butylphenyl)iodoniumtrifluoromethanesulfonate 171292-12-9
195398-49-3 211377-75-2 220204-16-0 221206-61-7 221206-62-8
RL: TEM (Technical or engineered material use); USES (Uses)
(neg.-working photoresist composition for
short-wave light comprising)

L65 ANSWER 22 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 130:160508 HCA

TITLE: Novel **negative photoresist**
based on polar alicyclic polymers for ArF
excimer laser lithography

AUTHOR(S): Iwasa, Shigeyuki; Nakano, Kaichiro; Maeda,
Katsumi; Hasegawa, Etsuo

CORPORATE SOURCE: Functional Devices Research Laboratories, NEC
Corporation, Kanagawa, 216-8555, Japan

SOURCE: Proceedings of SPIE-The International Society
for Optical Engineering (1998), 3333(Pt. 1,
Advances in Resist Technology and Processing
XV), 417-424

CODEN: PSISDG; ISSN: 0277-786X

PUBLISHER: SPIE-The International Society for Optical
Engineering

DOCUMENT TYPE: Journal

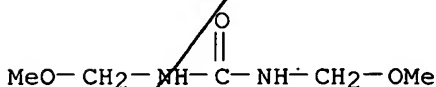
LANGUAGE: English

AB A new polar alicyclic polymer has been developed as an ArF neg.
resist polymer. Poly(carboxytetracyclo[4.4.0.12,517,10] dodecyl
acrylate-hydroxytricyclo[5.2.1.02,6]decyl acrylate)
(poly(CTCDDAm-TCDAOHn)) has carboxyl and hydroxyl groups. It was
founded that reactivity of the hydroxyl group was much higher than
that of the carboxyl group in the acid-catalyzed crosslinking
reaction. Poly(CTCDDA32-TCDAOH68) exhibits good solubility (0.5 µm/s)
in the standard developer (2.38% TMAH aqueous), high transparency (70%/0.5
µm) at 193-nm and high thermal stability (decomposition point:
230°C). A chemical amplified neg. resist composed of this
polymer and 1,3,4,6-tetrakis(methoxymethyl)glycoluril (TMGU)
provided a resolution of 0.18-µm L/S pattern with an ArF exposure
system (NA = 0.55) at a 9.2 mJ/cm² dose.

IT 141-07-1, 1,3-Bis(methoxymethyl)urea
RL: TEM (Technical or engineered material use); USES (Uses)
(crosslinker; neg. photoresist based on
poly(carboxytetracyclododecyl acrylate-hydroxytricyclodecyl
acrylate) for ArF excimer laser lithog.)

RN 141-07-1 HCA

CN Urea, N,N'-Bis(methoxymethyl)- (9CI) (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)

ST chem amplified **neg photoresist** alicyclic polymer
excimer laser lithog

IT **Negative photoresists**
 (chemical amplification; **neg. photoresist** based
 on poly(carboxytetracyclododecyl acrylate-hydroxytricyclododecyl
 acrylate) for ArF excimer laser lithog.)

IT Transparency
 UV and visible spectra
 (crosslinker effects on transmittance of **neg.**
photoresist based on poly(carboxytetracyclododecyl
 acrylate-hydroxytricyclododecyl acrylate) for ArF excimer laser
 lithog.)

IT Thermal stability
 (**neg. photoresist** based on
 poly(carboxytetracyclododecyl acrylate-hydroxytricyclododecyl
 acrylate) for ArF excimer laser lithog.)

IT Absorptivity
 (of crosslinkers for **neg. photoresist** based
 on poly(carboxytetracyclododecyl acrylate-hydroxytricyclododecyl
 acrylate) for ArF excimer laser lithog.)

IT Solubility
 (solubility of **neg. photoresist** based on
 poly(carboxytetracyclododecyl acrylate-hydroxytricyclododecyl
 acrylate) for ArF excimer laser lithog.)

IT **141-07-1**, 1,3-Bis(methoxymethyl)urea 3089-11-0,
 Hexamethoxymethylmelamine 4356-60-9 17464-88-9,
 1,3,4,6-Tetrakis(methoxymethyl)glycoluril
 RL: TEM (Technical or engineered material use); USES (Uses)
 (crosslinker; **neg. photoresist** based on
 poly(carboxytetracyclododecyl acrylate-hydroxytricyclododecyl
 acrylate) for ArF excimer laser lithog.)

IT 75-59-2, Tetramethylammonium hydroxide
 RL: NUU (Other use, unclassified); USES (Uses)
 (developer; solubility of **neg. photoresist** based
 on poly(carboxytetracyclododecyl acrylate-hydroxytricyclododecyl
 acrylate) for ArF excimer laser lithog.)

IT 211377-75-2
 RL: MOA (Modifier or additive use); USES (Uses)
 (**neg. photoresist** based on
 poly(carboxytetracyclododecyl acrylate-hydroxytricyclododecyl
 acrylate) for ArF excimer laser lithog.)

IT 220204-16-0
 RL: PRP (Properties); TEM (Technical or engineered material use);
 USES (Uses)
 (**neg. photoresist** based on
 poly(carboxytetracyclododecyl acrylate-hydroxytricyclododecyl
 acrylate) for ArF excimer laser lithog.)

IT 66003-78-9, Triphenylsulfonium triflate
 RL: TEM (Technical or engineered material use); USES (Uses)
 (**photoacid generator; neg.**
photoresist based on poly(carboxytetracyclododecyl
 acrylate-hydroxytricyclododecyl acrylate) for ArF excimer laser
 lithog.)

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT

L65 ANSWER 23 OF 36 HCA COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 129:142592 HCA
 TITLE: Materials and method for positive image
 formation with IR exposure

INVENTOR(S): Hirai, Katsura
 PATENT ASSIGNEE(S): Konica Co., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10171108	A2	19980626	JP 1996-316192	19961127
US 5932392	A	19990803	US 1997-944422	19971006
PRIORITY APPLN. INFO.:			JP 1996-265797	A 19961007
			JP 1996-316192	A 19961127

AB The title materials comprise a support and a photosensitive layer containing compds. forming **acids** upon **light irradiation**, resols, acrylic polymers containing aromatic hydroxy group-containing monomer units, and IR absorbers.

IT **210582-12-0P**, N,N-Dimethylolmethacrylamide-ethyl acrylate-ethyl methacrylate-acrylonitrile-N-(4-hydroxyphenyl)methacrylamide copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (materials and method for pos. image formation with IR exposure)

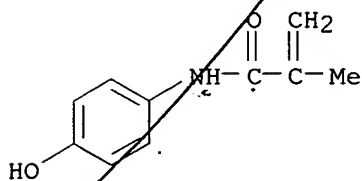
RN 210582-12-0 HCA

CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with N,N-bis(hydroxymethyl)-2-methyl-2-propenamide, ethyl 2-propenoate, N-(4-hydroxyphenyl)-2-methyl-2-propenamide and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

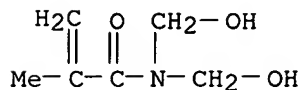
CRN 19243-95-9

CMF C10 H11 N O2



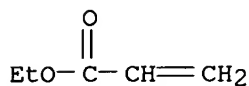
CM 2

CRN 5138-24-9
CMF C6 H11 N O3



CM 3

CRN 140-88-5
CMF C5 H8 O2



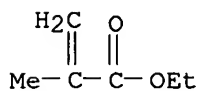
CM 4

CRN 107-13-1
CMF C3 H3 N



CM 5

CRN 97-63-2
CMF C6 H10 O2



IC ICM G03F007-004
ICS G03F007-00; G03F007-033; G03F007-039; G03F007-30
CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
IT 24979-71-3P, p-Hydroxystyrene-methyl methacrylate copolymer
136826-54-5P, Ethyl acrylate-ethyl methacrylate-acrylonitrile-N-(4-
hydroxyphenyl)methacrylamide copolymer 210582-11-9P, Ethyl
acrylate-ethyl methacrylate-acrylonitrile-vinylbenzyl
acetate-N-(4-hydroxyphenyl)methacrylamide copolymer
210582-12-0P, N,N-Dimethylolmethacrylamide-ethyl
acrylate-ethyl methacrylate-acrylonitrile-N-(4-
hydroxyphenyl)methacrylamide copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
(Technical or engineered material use); PREP (Preparation); USES
(Uses)
(materials and method for pos. image formation with IR exposure)

L65 ANSWER 24 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 128:121756 HCA
TITLE: Positive image-forming composition

INVENTOR(S): Kawamura, Koichi; Uenishi, Kazuya
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Eur. Pat. Appl., 49 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 814381	A1	19971229	EP 1997-110034	19970619
EP 814381	B1	20010919		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 10010735	A2	19980116	JP 1996-160276	19960620
JP 3601738	B2	20041215		
JP 10039514	A2	19980213	JP 1996-190939	19960719
JP 3601739	B2	20041215		
PRIORITY APPLN. INFO.:			JP 1996-160276	A 19960620
			JP 1996-190939	A 19960719

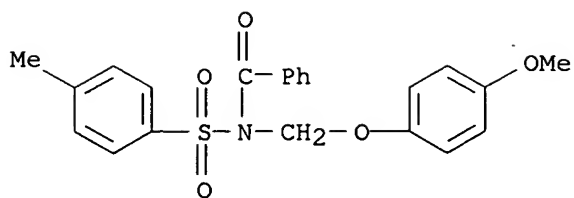
AB A pos. image-forming composition comprises (a) a compound generating an acid by the action of light or heat and (b) at least one compound selected from the N-sulfonylamide compds. represented by the formula $L1(SO2NR2COR1)n$ or $L1(CONR2SO2R1)n$ wherein n is an integer of from 1 to 6, R1 represents an aromatic group or an alkyl group, L1 represents an aromatic group or an alkyl group when n is 1 or L1 represents a polyvalent linkage group constituted of nonmetal atoms when n is from 2 to 6, and R2 represents a tertiary alkyl group, an alkoxymethyl group, an arylmethyl group, or an alicyclic alkyl group or (c) a polymer having constitutional units represented by the formula $-SO2NR3CO-$ wherein R3 represents a tertiary alkyl group, an alkoxymethyl group, an arylmethyl group, or an alicyclic alkyl group.

IT 201656-41-9 201656-45-3 201656-46-4

RL: TEM (Technical or engineered material use); USES (Uses)
 (photochem. acid generator for pos. photoresists)

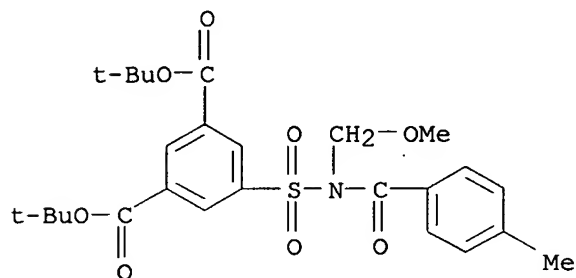
RN 201656-41-9 HCA

CN Benzamide, N-[(4-methoxyphenoxy)methyl]-N-[(4-methylphenyl)sulfonyl]-
 (9CI) (CA INDEX NAME)



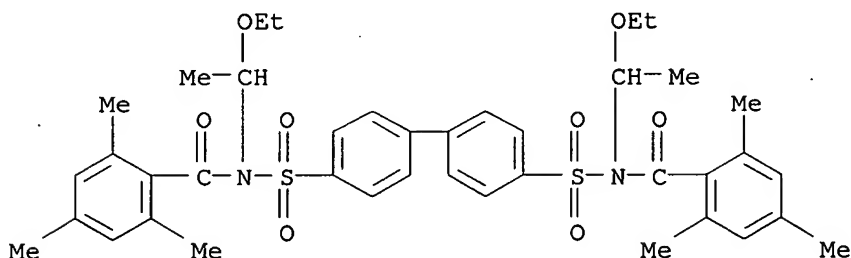
RN 201656-45-3 HCA

CN 1,3-Benzenedicarboxylic acid, 5-[[[(methoxymethyl)(4-methylbenzoyl)amino]sulfonyl]-, bis(1,1-dimethylethyl) ester (9CI)
(CA INDEX NAME)



RN 201656-46-4 HCA

CN Benzamide, N,N'-[[[1,1'-biphenyl]-4,4'-diylbis(sulfonyl)]]bis[N-(1-ethoxyethyl)-2,4,6-trimethyl- (9CI) (CA INDEX NAME)



IT 201656-56-6 201656-57-7

RL: TEM (Technical or engineered material use); USES (Uses)
(pos. photoresists containing)

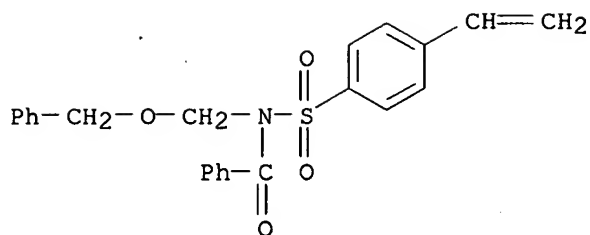
RN 201656-56-6 HCA

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester,
polymer with N-[(4-ethenylphenyl)sulfonyl]-N-
[(phenylmethoxy)methyl]benzamide (9CI) (CA INDEX NAME)

CM 1

CRN 201656-55-5

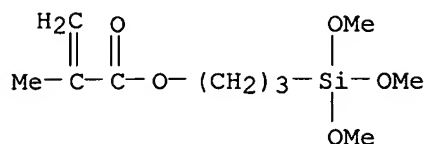
CMF C23 H21 N O4 S



CM 2

CRN 2530-85-0

CMF C10 H20 O5 Si



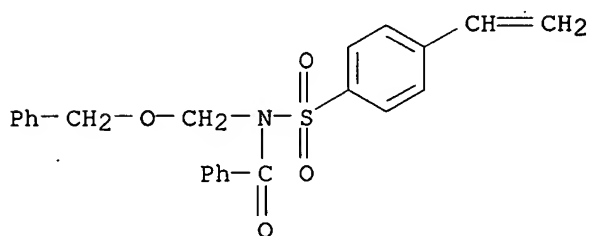
RN 201656-57-7 HCA

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with
N-[(4-ethenylphenyl)sulfonyl]-N-[(phenylmethoxy)methyl]benzamide
(9CI) (CA INDEX NAME)

CM 1

CRN 201656-55-5

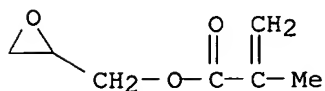
CMF C23 H21 N O4 S



CM 2

CRN 106-91-2

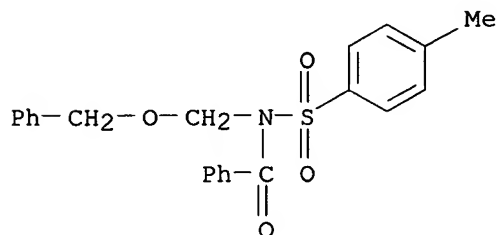
CMF C7 H10 O3



IT 201656-40-8P

RL: SPN (Synthetic preparation); TEM (Technical or engineered
material use); PREP (Preparation); USES (Uses)
(preparation and use as photochem. acid generator for pos.

photoresists)
 RN 201656-40-8 HCA
 CN Benzamide, N-[(4-methylphenyl)sulfonyl]-N-[(phenylmethoxy)methyl]-
 (9CI) (CA INDEX NAME)



IC ICM G03F007-004
 ICS G03F007-039
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 ST pos photoimaging compn lithog plate; sulfonylamide **photoacid**
generator pos photoimaging compn; thermal acid generator pos
 photoimaging compn
 IT **201656-41-9** 201656-43-1 201656-44-2 **201656-45-3**
201656-46-4 201656-47-5
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photochem. acid generator for pos. photoresists)
 IT 548-62-9, Crystal violet 27029-76-1, m-Cresol-p-cresol-
 formaldehyde copolymer 68541-73-1 201656-53-3 201656-54-4
201656-56-6 **201656-57-7** 201656-59-9
 201656-61-3 201656-63-5 201656-65-7 201656-67-9 201656-68-0
 RL: TEM (Technical or engineered material use); USES (Uses)
 (pos. photoresists containing)
 IT 77-58-7 85-44-9, 1,3-Isobenzofurandione 95-57-8, o-Chlorophenol
 22371-56-8, NK-3508 38686-70-3 69432-40-2 117283-53-1,
 Victoria Pure Blue BOH 1-naphthalenesulfonate
 RL: TEM (Technical or engineered material use); USES (Uses)
 (pos. photoresists containing sulfonylamide **photoacid**
generators and)
 IT **201656-40-8P** 201656-42-0P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered
 material use); PREP (Preparation); USES (Uses)
 (preparation and use as photochem. acid generator for pos.
 photoresists)

L65 ANSWER 25 OF 36 HCA COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 127:227445 HCA
 TITLE: Negative photosensitive acrylic composition for
 color filter and black matrix
 INVENTOR(S): Ochiai, Tamekazu; Takasaki, Ryuichiro
 PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 09203806 A2 19970805 JP 1996-12576

199601
29

PRIORITY APPLN. INFO.: JP 1996-12576

199601
29

AB The composition contains (a) an acrylic polymer with CO₂H, (B) a **photoacid generator**, (c) a crosslinking agent which cures a polymer with an acid, (d) a pigment, and (e) a solvent. The photosensitive composition shows good sensitivity and chemical resistance. The **neg. photoresist** is suitable for forming a color pattern of red, blue, and green and also a black matrix.

IT 9011-05-6, UFR 65

RL: MOA (Modifier or additive use); USES (Uses)
(neg. photosensitive acrylic composition for color filter and black matrix)

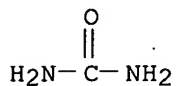
RN 9011-05-6 HCA

CN Urea, polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 57-13-6

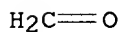
CMF C H4 N2 O



CM 2

CRN 50-00-0

CMF C H2 O



IC ICM G02B005-20

ICS C09D133-02; C09K003-00; G02F001-1335; G03F007-004; G03F007-028;
G03F007-039

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 9003-08-1, Nikalac MX 101 9011-05-6, UFR 65

RL: MOA (Modifier or additive use); USES (Uses)
(neg. photosensitive acrylic composition for color filter and black matrix)

IT 42573-57-9 93641-25-9 154880-05-4

RL: MOA (Modifier or additive use); USES (Uses)
(**photoacid generator**; neg. photosensitive acrylic composition for color filter and black matrix)

L65 ANSWER 26 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 127:115160 HCA

TITLE: A Water-Castable, Water-Developable Chemically
Amplified Negative-Tone Resist

AUTHOR(S): Lin, Qinghuang; Steinhäusler, Thomas; Simpson, Logan; Wilder, Michelle; Medeiros, David R.; Willson, C. Grant; Havard, Jennifer; Frechet, Jean M. J.

CORPORATE SOURCE: Departments of Chemistry and Chemical Engineering, University of Texas, Austin, TX, 78712-1026, USA

SOURCE: Chemistry of Materials (1997), 9(8), 1725-1730
CODEN: CMATEX; ISSN: 0897-4756

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB This paper describes an "environmentally friendly", water-castable, water-developable photoresist system. The chemical amplified neg.-tone resist system consists of three water-soluble components: a polymer, poly(Me acrylamidoglycolate Me ether), [poly(MAGME)]; a **photoacid generator**, (2,4-dihydroxyphenyl)dimethylsulfonium triflate, and a crosslinker, 1,4-butanediol. In the three-component resist system, the acid generated by photolysis of the **photoacid generator** catalyzes the crosslinking of poly(MAGME) in the exposed regions during postexposure baking, thus rendering the exposed regions insol. in water. Neg.-tone relief images are obtained by developing with pure water. The resist is able to resolve 1 μm line/space features (1:1 aspect ratio) with a deep-UV exposure dose of 100 mJ/cm² (dose to print). The resist can be used to generate etched copper relief images on printed circuit boards using aqueous sodium persulfate as the etchant. The mechanism of crosslinking has been investigated by model compound studies using ¹³C NMR.

IT 104452-10-0, Poly(methyl acrylamidoglycolate methyl ether)
RL: TEM (Technical or engineered material use); USES (Uses)
(water-castable water-developable chemical amplified **neg** .-tone **photoresist** system containing)

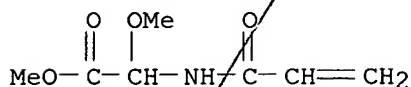
RN 104452-10-0 HCA

CN Acetic acid, methoxy[(1-oxo-2-propenyl)amino]-, methyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 77402-03-0

CMF C7 H11 N O4



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76

IT Photoresists
(environmentally friendly water-castable water-developable chemical amplified **neg**.-tone **photoresist** system)

IT Printed circuits
(environmentally friendly water-castable water-developable chemical amplified **neg**.-tone **photoresist** system for fabrication of)

IT Crosslinking
(**photoacid**-catalyzed; of poly(Me acrylamidoglycolate Me

ether) by butanediol in chemical amplified **neg.-tone photoresist** system)

IT 110-63-4, 1,4-Butanediol, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (crosslinker; water-castable water-developable chemical amplified **neg.-tone photoresist** system containing)

IT 180787-54-6P, 2,4-Dihydroxyphenyldimethylsulfonium triflate
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (photoacid generator; water-castable water-developable chemical amplified **neg.-tone photoresist** system containing)

IT 104452-10-0, Poly(methyl acrylamidoglycolate methyl ether)
 RL: TEM (Technical or engineered material use); USES (Uses)
 (water-castable water-developable chemical amplified **neg.-tone photoresist** system containing)

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 27 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 125:261247 HCA

TITLE: Chemically amplified, radiation-sensitive resin composition

INVENTOR(S): Yamachika, Mikio; Kusama, Masatoshi; Kobayashi, Yasutaka; Tsuji, Akira

PATENT ASSIGNEE(S): Japan Synthetic Rubber Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 30 pp.
 CODEN: EPXXDW

DOCUMENT TYPE: Patent

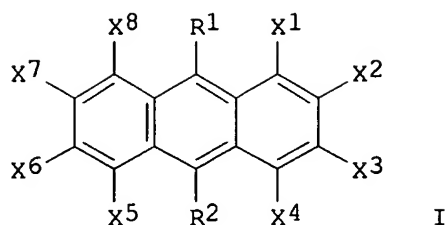
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 726500	A1	19960814	EP 1996-300926	19960212
EP 726500	B1	20000531		
R: DE, FR, GB, IT, NL				
JP 08217815	A2	19960827	JP 1995-46672	19950213
JP 3579946	B2	20041020		
US 5731125	A	19980324	US 1996-597561	19960202
JP 2004310121	A2	20041104	JP 2004-145260	20040514
PRIORITY APPLN. INFO.:			JP 1995-46672	A 19950213

OTHER SOURCE(S): MARPAT 125:261247
 GI



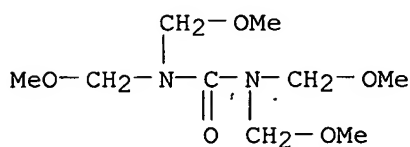
AB A chemical amplified, radiation-sensitive resin composition comprises a radiation-sensitive acid generator which **generates** an **acid** upon **irradiation** with a radiation and in which the chemical change due to the catalytic action of the acid changes the solubility of the irradiated portion in a developer to form a pattern, characterized by comprising an anthracene derivative of the formula I (X1-8 = H, halogen, alkyl, alkoxy, aryl, or nitro; R1, R2 = H, halogen, alkyl, alkoxy, aryl, nitro, (CH₂)_nOR₃, (CH₂)_nCO₂R₃ where R₃ = H, alkyl, or aryl; n = an integer of 0-3), such as anthracene-9-methanol and 9-ethoxycarbonylanthracene.

IT 112288-39-8

RL: TEM (Technical or engineered material use); USES (Uses)
(radiation-sensitive resin compns. containing)

RN 112288-39-8 HCA

CN Urea, tetrakis(methoxymethyl)- (9CI) (CA INDEX NAME)



IC ICM G03F007-09

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 101-77-9, Diaminodiphenylmethane 102-69-2, Tripropylamine
102-82-9, Tributylamine 1468-95-7, Anthracene-9-methanol
3089-11-0, Hexa(methoxymethyl)melamine 17464-88-9 41034-83-7,
9-Anthracenepropanoic acid 66003-78-9, Triphenylsulfonium triflate
69432-40-2, 2-(4-Methoxy-1-naphthyl)-4,6-bis(trichloromethyl)-1,3,5-
triazine 75802-40-3, 9-Anthracenepentanoic acid
112288-39-8 133710-62-0 138529-81-4,
Bis(cyclohexylsulfonyl)diazomethane

RL: TEM (Technical or engineered material use); USES (Uses)
(radiation-sensitive resin compns. containing)

L65 ANSWER 28 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 122:118984 HCA

TITLE: Pattern-forming material

INVENTOR(S): Kudo, Takanori; Masuda, Seiya; Kinoshita,
Yoshiaki; Przybilla, Klaus Juergen; Endo,
Hajime; Suehiro, Natsmui; Okazaki, Hiroshi

PATENT ASSIGNEE(S): Hoechst Japan Ltd., Japan

SOURCE: PCT Int. Appl., 30 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9415260	A1	19940707	WO 1993-JP1858	19931222
W: KR, US RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 06194834	A2	19940715	JP 1992-347042	19921225
JP 3148426	B2	20010319		
EP 633502	A1	19950111	EP 1994-903042	19931222
EP 633502	B1	20020320		
R: BE, CH, DE, FR, GB, LI				
US 5691100	A	19971125	US 1996-623735	19960329

PRIORITY APPLN. INFO.:

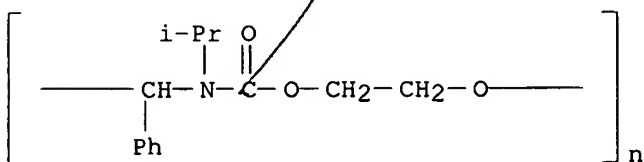
JP 1992-347042	A	19921225
WO 1993-JP1858	W	19931222
US 1994-296361	B1	19940825

AB A pattern-forming material having a high exposure tolerance and rarely causing the dimensions of a pattern to vary with respect to the variation of exposure comprises a compound **generating** an **acid** upon **irradiation** with light, a compound generating a base or increasing its basicity upon irradiation with light, a compound having at least one bond capable of being cleft with an acid, and/or a compound not dissolving in water but dissolving in an alkali aqueous solution

IT **160714-37-4**
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photoimaging and photoresist compns. containing)

RN 160714-37-4 HCA

CN Poly[oxy-1,2-ethanediylloxycarbonyl[(1-methylethyl)imino](phenylmethy lene)] (9CI) (CA INDEX NAME)



IC ICM G03F007-028
ICS G03F007-004
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT Resists
(photo-, containing photosensitive acid- and base-generating compds. and acid-cleaving compds.)
IT 1143-92-6 13433-31-3 29322-78-9, Poly(3-methyl-4-hydroxystyrene)
130100-38-8 **160714-37-4**
RL: TEM (Technical or engineered material use); USES (Uses)
(photoimaging and photoresist compns. containing)

L65 ANSWER 29 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 121:96051 HCA

TITLE: **Negative-working photoresists**
compositions useful for making semiconductor circuits

INVENTOR(S): Kitaori, Tomoyuki; Koyanagi, Takao; Fukunaga, Masanori

PATENT ASSIGNEE(S): Nippon Kayaku Kk, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

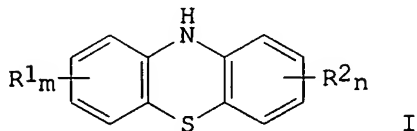
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 06035194	A2	19940210	JP 1992-213264	199207 20
PRIORITY APPLN. INFO.:			JP 1992-213264	199207 20

OTHER SOURCE(S): MARPAT 121:96051
GI



AB The title compns. comprise an alkali-soluble resin, a **photoacid-generating** agent, a crosslinking agent which crosslinks the resin under acidic conditions, a sensitizer I [m, n = 1, 2; R1, R2 = CR3R4Ph, CR5R6CR7R8Ph (R3-8 = H, lower alkyl)] which provides photosensitivity in near UV regions to the **photoacid-generating** agent. The compns. useful for making semiconductor integrated circuits show high sensitivity toward radiations and provide high resolution patterns with good thermal resistance and dry etching resistance. Thus, a photoresist

comprised Maruka Lyncur S-2P (polyhydroxystyrene), CBr3SO2Ph, Cymel 1123, and Antage STDP-N.

IT 9011-05-6, UFR 65

RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agent, photoresist containing)

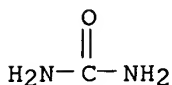
RN 9011-05-6 HCA

CN Urea, polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 57-13-6

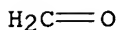
CMF C H4 N2 O



CM 2

CRN 50-00-0

CMF C H2 O



IC ICM G03F007-038

ICS G03F007-004; G03F007-029; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

ST phenothiazine deriv sensitizer photoresist; crosslinking agent
photoresist; **photoacid generating agent**
photoresist

IT **Resists**

(**photo-**, **neg.**-working, containing phenothiazine
derivs. sensitizer)

IT 9003-08-1, Cymel 303 9011-05-6, UFR 65 15968-37-3, Cymel
1170 66810-89-7, Cymel 1123

RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agent, photoresist containing)

IT 72-43-5, 2,2-Bis(4-methoxyphenyl)-1,1,1-trichloroethane
17025-47-7, Tribromomethylphenylsulfone 52434-90-9

RL: USES (Uses)
(**photoacid generator**, photoresist containing)

IT 38201-66-0P

RL: PREP (Preparation)
(preparation of, sensitizer, of **photoacid-generator**
, photoresist containing)

IT 693-36-7, Antage STDP-N

RL: USES (Uses)
(sensitizer, of **photoacid-generator**,
photoresist containing)

L65 ANSWER 30 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 120:257434 HCA

TITLE: **Negative-working photoresist**
composition

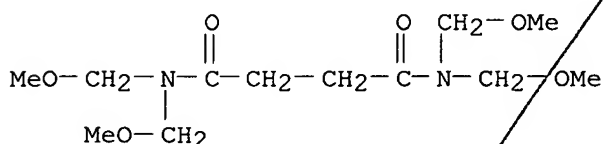
INVENTOR(S): Ochiai, Tameichi; Takahashi, Noriaki; Ishiguro, Tomoyo
 PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05034921	A2	19930212	JP 1991-190059	19910730

PRIORITY APPLN. INFO.: JP 1991-190059 19910730

AB The title composition comprises a hydrogenated alkali-soluble phenolic resin, a crosslinking agent(gram absorption coefficient ≤ 20 L/g.cm at 248 nm) capable of reacting with the above resin in an acidic condition and a **photo acid-generator**. The composition shows small UV absorption, gives high-resolution pattern profile and is very useful as far UV photoresists.

IT **154340-09-7**
 RL: MOA (Modifier or additive use); USES (Uses)
 (crosslinking agent, **neg.-working photoresist** composition containing)
 RN 154340-09-7 HCA
 CN Butanediamide, N,N,N',N'-tetrakis(methoxymethyl)- (9CI) (CA INDEX NAME)



IC ICM G03F007-038
 ICS G03F007-004; G03F007-029; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 ST **neg working photoresist** compn; alkali sol phenolic resin photoresist
 IT Phenolic resins, uses
 RL: USES (Uses)
 (hydrogenated, alkali-soluble, **neg.-working photoresist** composition containing)
 IT 1529-68-6, 1,2,3,4-Tetrabromobutane 30362-01-7,
 2,4,6-Tris(dibromomethyl)-s-triazine
 RL: USES (Uses)
 (acid generator, **neg.-working photoresist** composition containing)
 IT 9003-08-1, Cymel 303 17464-88-9 **154340-09-7**
 RL: MOA (Modifier or additive use); USES (Uses)

(crosslinking agent, **neg.-working photoresist**
composition containing)

IT 24979-70-2 59269-51-1

RL: USES (Uses)

(**neg.-working photoresist** composition containing)

L65 ANSWER 31 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 120:65909 HCA

TITLE: Negative-working UV photosensitive composition
INVENTOR(S): Ochiai, Tameichi; Takahashi, Noriaki; Ishiguro,
Tomoyo

PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05034903	A2	19930212	JP 1991-194444	199108 02
PRIORITY APPLN. INFO.:			JP 1991-194444	199108 02

AB The title composition contains an alkali-soluble resin, a photosensitive acid-generating agent, a crosslinking agent which crosslinks with the alkali-soluble resin under acid condition, and a solvent R1[OCH(Me)CH2]mOR2 (R1, R2 = acetyl, C1-4 alkyl; m = 1, 2). The solvent in the photosensitive composition is nontoxic and the composition shows very good shelf life and good resolution

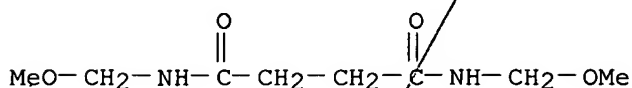
IT **148124-25-8**

RL: USES (Uses)

(**neg.-working photosensitive composition** containing)

RN 148124-25-8 HCA

CN Butanediamide, N,N'-bis(methoxymethyl)- (9CI) (CA INDEX NAME)



IC ICM G03F007-004

ICS G03F007-004; G03F007-029; G03F007-038; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **neg working UV photosensitive compn; UV photoresist**
neg shelf life

IT Resists

(**photo-, UV, acid-generating, with**
improved shelf life)

IT 3089-11-0, Hexamethoxymethyl melamine 52434-90-9, Tris(2,
3-dibromopropyl)isocyanurate 59269-51-1, Poly(vinyl phenol)

148124-25-8

RL: USES (Uses)

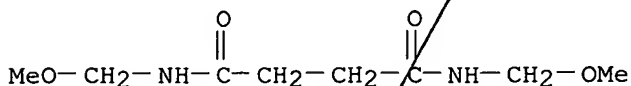
(neg.-working photosensitive composition containing)

L65 ANSWER 32 OF 36 HCA COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 119:17958 HCA
 TITLE: Negative-working photosensitive compositions
 using halogenated sulfolane derivative as
photo-acid-generating
 agent
 INVENTOR(S): Ochiai, Tameichi; Takahashi, Noriaki; Takasaki,
 Ryuichiro
 PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04338757	A2	19921126	JP 1991-110547	199105 15
JP 2943387	B2	19990830	JP 1991-110547	199105 15

PRIORITY APPLN. INFO.:

OTHER SOURCE(S): MARPAT 119:17958
 AB The photosensitive compns. contain an alkali-soluble resin, a crosslinking agent which acts for the resin under acidic conditions, and a halogenated sulfolane derivative as a **photo-acid-generating** agent. The compns. provide high resolution lithog. by exposure with light in deep UV region and i- and g-ray. Thus, a photoresist comprising poly(vinyl phenol), hexamethoxymethylmelamine, and 2,3-dibromosulforane was coated on a Si wafer, patternwise exposed with excimer laser, post-baked, and developed with a Me4NOH solution to form a high resolution pattern.
 IT **148124-25-8**
 RL: MOA (Modifier or additive use); USES (Uses)
 (crosslinking agent, **neg.-working photoresist** containing)
 RN 148124-25-8 HCA
 CN Butanediamide, N,N'-bis(methoxymethyl)- (9CI) (CA INDEX NAME)



IC ICM G03F007-038
 ICS G03F007-004; G03F007-029; H01L021-027
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 76
 IT Phenolic resins, uses
 RL: USES (Uses)
 (**neg.-working photoresist** containing)

IT **Resists**
 (photo-, neg.-working; halogenated sulfolane
 as acid generator for)

IT 30129-85-2
 RL: USES (Uses)
 (acid generator, neg.-working photoresist
 containing)

IT 3089-11-0, Hexamethoxymethylmelamine 148124-25-8
 RL: MOA (Modifier or additive use); USES (Uses)
 (crosslinking agent, neg.-working photoresist
 containing)

IT 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer 59269-51-1,
 Polyvinylphenol
 RL: USES (Uses)
 (neg.-working photoresist containing)

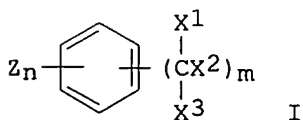
IT 92-84-2, Phenothiazine
 RL: USES (Uses)
 (sensitizer, neg.-working photoresist containing)

L65 ANSWER 33 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 117:141867 HCA
 TITLE: Negatively photosensitive composition containing
 benzene derivative acid-generating agent
 INVENTOR(S): Ochiai, Tameichi; Takahashi, Noriaki; Ishiguro,
 Tomoyo; Shinozaki, Mika
 PATENT ASSIGNEE(S): Mitsubishi Kasei K. K., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04107560	A2	19920409	JP 1990-227581	199008 29
PRIORITY APPLN. INFO.:			JP 1990-227581	199008 29

OTHER SOURCE(S): MARPAT 117:141867
 GI



AB The composition contains an alkaline-soluble resin, a crosslinking agent, and an
 I light-induced acid-generating agent
 [X1-3 = H, Cl, Br, (substituted) alkyl; Z = alkyl; n = 0-3; m = 1-3;

≥1 X1-3 = Cl, Br]. The composition is used in manufacture of semiconductor devices. The composition showed high photosensitivity and was exposed in a deep UV region.

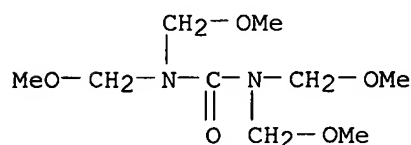
IT 112288-39-8

RL: USES (Uses)

(neg. photoresist composition containing, for manufacture of semiconductor device)

RN 112288-39-8 HCA

CN Urea, tetrakis(methoxymethyl)- (9CI) (CA INDEX NAME)



IC ICM G03F007-038

ICS G03F007-004; G03F007-031; H01L021-027

CC 76-3 (Electric Phenomena)

Section cross-reference(s): 74

IT Semiconductor devices

(neg. photoresist composition for manufacture of, by benzene derivative acid-generating agent with high sensitivity)

IT 68-36-0, 1,4-Bis(trichloromethyl)benzene

RL: USES (Uses)

(acid-generating agent, neg. photoresist composition containing, for manufacture of semiconductor device)

IT 59269-51-1, Poly(vinyl phenol) 112288-39-8

RL: USES (Uses)

(neg. photoresist composition containing, for manufacture of semiconductor device)

L65 ANSWER 34 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 105:226071 HCA

TITLE: Phthalic acid N,N,N',N'-tetrakis(isopropoxymethyl)diamides as tanning agents of emulsion gelatin light-sensitive layers

INVENTOR(S): Zavlin, P. M.; Rodnyanskaya, E. R.; Shevchik, N. D.; Levit, N. V.; Mikhailova, G. L.

PATENT ASSIGNEE(S): Leningrad Institute of Motion-Picture Engineers, USSR

SOURCE: U.S.S.R. From: Otkrytiya, Izobret. 1986, (30), 83.

CODEN: URXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

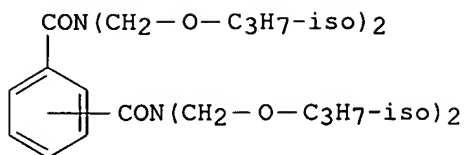
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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SU 1250563	A1	19860815	SU 1985-3885900	198503 25

PRIORITY APPLN. INFO.: SU 1985-3885900

198503

GI



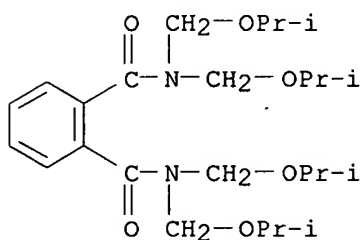
AB Phthalic acid N,N,N',N'-tetrakis(isopropoxymethyl)diamides (I) are used as hardening agents of emulsion gelatin light-sensitive layers.

IT 105532-46-5 105532-47-6 105532-48-7

RL: RCT (Reactant); RACT (Reactant or reagent)
(photog. hardening agent)

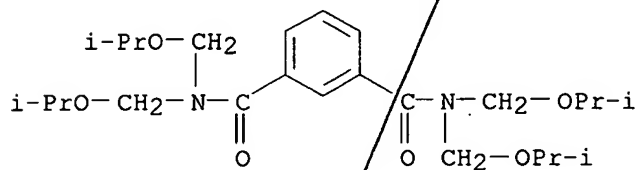
RN 105532-46-5 HCA

CN 1,2-Benzenedicarboxamide, N,N,N',N'-tetrakis[(1-methylethoxy)methyl]-
(9CI) (CA INDEX NAME)



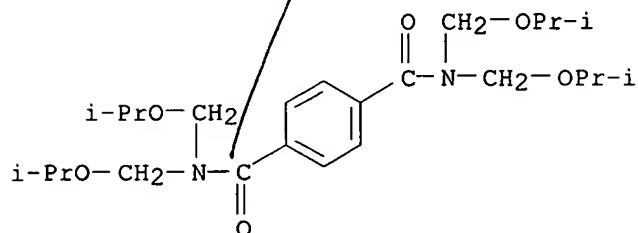
RN 105532-47-6 HCA

CN 1,3-Benzenedicarboxamide, N,N,N',N'-tetrakis[(1-methylethoxy)methyl]-
(9CI) (CA INDEX NAME)



RN 105532-48-7 HCA

CN 1,4-Benzenedicarboxamide, N,N,N',N'-tetrakis[(1-methylethoxy)methyl]-
(9CI) (CA INDEX NAME)



IC ICM C07C103-78

ICS G03C001-30
 CC 25-19 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
 Section cross-reference(s): 74
 ST phthalic acid isopropoxymethyldiamide photog
 hardening agent
 IT 105532-46-5 105532-47-6 105532-48-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (photog. hardening agent)

L65 ANSWER 35 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 105:143435 HCA

TITLE: Ethylphenylmalonic acid (N,N,N',N'-
 tetraisopropoxymethyl)diamide as photographic
 hardening agent

INVENTOR(S): Zavlin, P. M.; Rodnyanskaya, E. R.; Levit, N.
 V.; Shevchik, N. D.; Mikhalova, G. L.; Naidis,
 F. B.

PATENT ASSIGNEE(S): Leningrad Institute of Motion-Picture Engineers,
 USSR

SOURCE: U.S.S.R. From: Otkrytiya, Izobret. 1985, (46),
 100.

CODEN: URXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1198058	A1	19851215	SU 1984-3794067	198409 26
			SU 1984-3794067	198409 26

PRIORITY APPLN. INFO.:

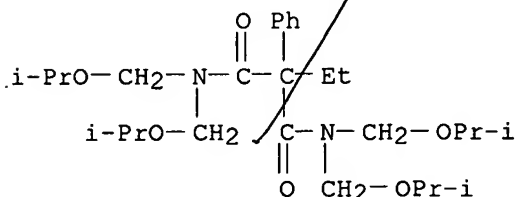
AB Ethylphenylmalonic acid (N,N,N',N'-tetraisopropoxymethyl)diamide is
 used as a hardening agent in photog. Ag halide-gelatin emulsions.

IT 104458-50-6

RL: TEM (Technical or engineered material use); USES (Uses)
 (photog. hardening agent)

RN 104458-50-6 HCA

CN Propanediamide, 2-ethyl-N,N,N',N'-tetrakis[(1-methylethoxy)methyl]-2-
 phenyl- (9CI) (CA INDEX NAME)



IC ICM C07C103-38

ICS G03C001-30

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)

ST ethylphenylmalonic acid tetraisopropoxymethyl diamide
 photog hardener
 IT 104458-50-6
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photog. hardening agent)

L65 ANSWER 36 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 98:225261 HCA

TITLE: Malonic acid (N,N,N',N'-tetraisopropoxymethyl) diamide as a hardening agent for gelatin emulsion photosensitive layers

INVENTOR(S): Zavlin, P. M.; Rodnyanskaya, E. R.; Sorri, Yu. L.; Babkin, V. V.; Kalinovskaya, E. K.

PATENT ASSIGNEE(S): Leningrad Institute of Motion-Picture Engineers, USSR

SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1983, (11), 135.

CODEN: URXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

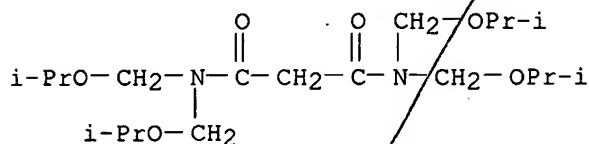
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1006429	A1	19830323	SU 1981-3361565	19810722
PRIORITY APPLN. INFO.:				19810722
				19810722

AB Gelatin photoemulsion layers are hardened by malonic acid (N,N,N',N'-tetraisopropoxymethyl) diamide.

IT 85946-77-6
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photog. hardening agent)

RN 85946-77-6 HCA

CN Propanediamide, N,N,N',N'-tetrakis[(1-methylethoxy)methyl]- (9CI)
 (CA INDEX NAME)



IC C07C103-38; G03C001-30

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST malonic acid diamide photog hardener

IT 85946-77-6
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photog. hardening agent)

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